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SAFEGUARD: THE HUMAN IMPLICATIONS

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A Dissertation

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School of Theology at Claremont

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Religion

by

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CHAPTER I

INTRODUCTION

"Divergent interests" are at stake in the military policy-making process, but these interests do not diverge over ultimate values except as they reflect different conceptions of how much of the national resources should be devoted to security as opposed to non-security values

To a much greater degree than in most other policy areas, military policy is a problem of factual analysis, informed prediction, and logical deduction, although value questions cannot be entirely excluded.¹

Many arguments favoring a policy of military strength depend upon sophisticated analysis of how such a policy will work in the real world, but leave so implicit the value questions of whether the primary objective of such a military policy should be to prevent war, to stop the tide of Communism, to roll back Communism, or whatever, that it takes a good deal of analysis to discover just what the arguer is aiming for.²

The missile game is played almost entirely within the limits of scientific and military concepts.³

As these quotations indicate, American military policy has been discussed primarily in terms of technical *facts*, with very little attention paid to an explicit analysis of human *values*. The majority of

¹Glenn H. Snyder, "The Politics of National Defense," *Journal of Conflict Resolution*, VI (December, 1962), 371.

²Robert A. Levine, *The Arms Debate* (Cambridge Harvard University Press, 1963), p. 4.

³Hubert H. Humphrey, "The State of the Question, An Introduction," in *ABM: Yes or No?* (Santa Barbara: Center for the Study of Democratic Institutions, 1969), p. 9.

of laymen see this as being entirely appropriate, and this often became graphically clear when people discovered I was doing an *ethical* analysis of ballistic missile defense. Bewilderment was the typical response, sometimes mixed with mild amusement. I might as well have said I was analyzing the ABM in terms of aesthetics; the connection would have been equally obscure.⁴

I must confess that I myself found the connection a bit vague when I began this investigation. Beyond a few general ideas, I was not at all sure which value-judgments would and would not prove significant. The purpose of my study was to *find out* where ethical evaluation was involved. Even if it turned out that values were only tangential to the anti-missile question, this in itself would be a significant finding. The current consensus would have been vindicated. As it happens, however, value-judgments turned out to be highly central, rather than merely peripheral.

But my motivation went beyond that of writing a case study on military policy and human values. A specific interest in the ABM was also involved. *SAFEGUARD* is a most significant weapons system, and it

⁴In all fairness, I should note that the *Safeguard* controversy changed these responses in some measure. Yet even though many writers now understand that *Safeguard* should be discussed in the context of an overall philosophy of what society ought to be like, there have been few attempts to consider it in this fashion. A brief and cogent early attempt was that of Allan M. Parrent, *The Problem of the Anti-Ballistic Missile* (New York: National Council of Churches, 1967).

is one whose ultimate role in the American strategic complex has not yet been permanently decided. Too often, the ethicist has lagged far behind advances in technology. Moralists have played the Monday morning quarterback, focusing on decisions that have already been made and are therefore quite difficult to modify. But the future of BMD is still most uncertain. It may be abolished, or it may be expanded severalfold in cost and significance.

Some preliminaries are in order before turning to the substance of the study.⁵ First of all, the rest of this chapter will sketch briefly the history of ballistic missile defense. Those who are familiar with the issue already may skim or skip to the next chapter, which deals with ethical methodology.

ABM research began in earnest during the late 1950's, as a response to the newly developed inter-continental ballistic missile. With a peak speed of fifteen to twenty thousand miles per hour, the ICBM seemed truly to be the ultimate weapon--hideously destructive and completely impossible to stop.

Several different approaches to ballistic missile defense were proposed, the most promising of which involved shooting down an ICBM with another missile. By the beginning of the Kennedy administration,

⁵The reader should be familiar with the following abbreviations: BMD: ballistic missile defense (generally synonymous with ABM); ICBM: inter-continental ballistic missile; MIRV: multiple independently-targetable re-entry vehicle; RV: re-entry vehicle; SLBM: submarine-launched ballistic missile.

the Army had developed a defense which it felt was worth deploying. The new President spent a good deal of time evaluating their system, the Nike-Zeus, but finally turned it down. As late as August 1, 1963, Kennedy concluded that a shield against missiles was technically impossible. "Many who work on it feel it can never be accomplished."⁶

About two months later, the Soviets paraded what was apparently a huge anti-ballistic missile through the streets of Moscow. Its effectiveness was unknown, nor could we tell whether it was intended for deployment. During 1964-65, however, ABM sites began to go up around Moscow and Leningrad. (The Leningrad site was later abandoned, and work on the Moscow system has been virtually halted for several months.)⁷ The much more elaborate "Tallin" complex was also under way, but it was difficult to tell whether this was really an ABM. It finally turned out to be an anti-bomber network.

These Soviet moves, which looked a good deal more extensive than they actually were, helped to buttress the arguments for an American ABM. Some important breakthroughs in technology during 1965-66 had a similar effect. In the early sixties, each ABM was effective over a relatively small area. It was therefore economically impossible to

⁶Quoted by James H. McBride, "The Coming Missile Gap," *U. S. News and World Report*, XLV (February 26, 1968), 84.

⁷What's the Answer to ABM and the War?" *U. S. News and World Report*, XLVI (April 7, 1969), 35.

defend more than twenty-five to fifty American cities. But by mid-decade it was alleged to be possible to build an "area defense," so that the whole United States could be covered by one or two dozen sites.

Yet another new argument for BMD was provided by the Soviet buildup of offensive missiles. Not long after Khrushchev's ouster, the Soviets began to move toward nuclear parity. In 1962 America had two hundred ICBM's and one hundred Polaris SLBM's to the Soviet Union's fifty.⁸ By 1967, the six-to-one ratio had been cut to around three-to-one; America had seventeen hundred ICBM's and SLBM's to the Soviet Union's five hundred thirty, and the Soviet buildup was moving at a fairly rapid pace.⁹ Even though we were far ahead, many Americans found the Soviet moves quite threatening. The then-Secretary of Defense, Robert S. McNamara, decided that America would build up its forces in response. He could have authorized an American ABM, upgraded our offensive weaponry, or both. He chose to expand our offensive capability, through the Poseidon and Minuteman III programs. These new missiles represent more than an improvement in overall effectiveness. They involve American development of the MIRV.

MIRV stands for multiple independently-targetable re-entry

⁸"Is Russia Winning the Arms Race?" *U. S. News and World Report*, XLIV (February 6, 1967), 34.

⁹*Ibid.*, p. 35.

vehicle. Our current ICBM's carry one warhead apiece. Poseidon can carry ten, each capable of being directed against a separate target. Minuteman III will carry at least three. This represents an incredible increase in United States striking power. Furthermore, the MIRV poses very serious problems for the arms controller (see Chapter V).

It now seemed clear that a new weapons race was in the making. The two superpowers were locked into what McNamara called the *action-reaction* phenomenon.¹⁰ Each side was responding to fears of what the other side might do to upset the strategic balance. Billions could be saved if the race were halted. The Johnson administration began to advocate bilateral arms control talks, and the Soviet Union agreed that such discussions would be desirable. It is difficult to estimate the sincerity of either party, but formal negotiations finally began in November, 1969.

In one respect, McNamara seems to have resisted the action-reaction tendency. He did not directly respond to the Soviet ABM with an American ABM. The Secretary felt that missile defense was an ineffective way to spend money. He contended that it would cost us more to

¹⁰ *Scope, Magnitude, and Implications of the United States Anti-Ballistic Missile Program*, 90th Congress, 1st Session, Joint Committee on Atomic Energy (Washington: Government Printing Office, 1967), p. 108.

build and deploy an ABM than it would cost the Soviets to overwhelm it by building additional missiles. McNamara did concede, as early as 1965, that a China-oriented ABM might be quite effective.¹¹ What would be nearly useless in defending our cities against the Soviets might shield us against the primitive missiles of a fledgling nuclear power. Estimates were made that Peking could develop a small ICBM force by the mid-seventies, and might test an ICBM rocket during 1967.¹² (As of April, 1970 no such test has been completed.)

On September 18, 1967, McNamara announced a crucial change of policy. America would build the ABM, although not the ten-to-twenty-billion-dollar "Nike-X" advocated by the Joint Chiefs of Staff. Instead we were opting for a "thin" defense called *Sentinel*. *Sentinel* was intended to protect American cities from Chinese ICBM's; its estimated cost was five billion dollars. *Sentinel* would also be useful if a lower echelon commander in any country launched a small number of missiles without authorization. An option to provide some defense of our offensive missiles against the Soviet Union was also included. This was considered a much more feasible task than protecting our cities from Soviet missiles, and the latter was not intended to be part of *Sentinel*'s mission.

¹¹Benson Adams, "McNamara's ABM Policy, 1961-1967," *Orbis*, XII (Spring, 1968), 216.

¹²"Chinese ICBM Shot Near," *Aerospace Technology*, XX (May 15, 1967), 3.

Until early 1969, Sentinel met with little opposition. Then a remarkable surge of public and congressional protest forced the Nixon administration to reconsider the whole question. Nixon's solution was a modified system called *Safeguard*. Like Sentinel, Safeguard is designed to protect against China, unauthorized launchings, and a Soviet attack on American ICBM's. The emphasis, however, is entirely different. The Soviet building of offensive missiles has continued to the point where the U. S. S. R. may soon have more effective nuclear striking power than does the United States.¹³ President Nixon feels that the appropriate American response is to reinforce our ability to absorb a Soviet attack and then strike back. Therefore the first two ABM sites ("Phase I") are designed to protect Minuteman missiles in Montana and North Dakota. Later on we have the option of adding perhaps a dozen other sites to protect our people ("Phase II"). This would provide some defense against China and against a small-scale attack from any nation. Safeguard's cost is set at 6.6 billion dollars.

Most of those who fought Sentinel are also fighting Safeguard. Several dozen organizations are now campaigning against it,¹⁴ and James Reston has suggested that ABM should stand for "Administration's

¹³George W. Rathjens, "The Dynamics of the Arms Race," *Scientific American*, CCXX (April, 1969), 20, maintains that the situation in October, 1968 was one of substantial equality.

¹⁴"Action Report: ABM," *New Republic*, CLX (April 26, 1969), 10.

Biggest Mistake."¹⁵ Nevertheless, Phase I passed the Senate by a fifty-one to fifty vote, with Vice-President Agnew breaking the tie.

Since the vote was so close, and since the administration has promised that Safeguard will be phased in subject to an annual review, the missile defense debate will certainly continue. Furthermore, the recent public discussions have transformed the issue from a technical controversy into a much broader discourse, in which both sides increasingly argue from an overall philosophy of what American society ought to be like. The ABM debate has become what it always should have been--a problem for both the military strategist and the social ethicist.

¹⁵Erwin Knoll, "Atomic Blackmail," *Progressive*, XXXIII (May, 1969), 23.

CHAPTER II

AN APPROACH TO THE ETHICS OF MILITARY POLICY

I. The Nature and Scope of Ethics

Those who have written on the problem of national defense have used moral terminology in a variety of senses, each of which may be legitimate in itself. To guard against confusion therefore, it is important to begin by defining what ethics is understood to encompass for the purposes of this study. Historically, this discipline has involved a critical inquiry into the appropriateness or inappropriateness of various patterns of human behavior. The standard for behavior has sometimes been external to man, as in most theistic orientations. In this study, a humanistic understanding of morality is assumed, but an understanding which depends heavily upon a background in the Judeo-Christian tradition. Certainly the idea that moral reflection ought to give equal weight to every human being is an important area of agreement between humanistic and theological ethics.

The ethics of defense policy involves an understanding of the relationship between military policy and human welfare.¹ It is immediately clear that this relationship cannot be examined directly with any precision. This means that in practice we set up penultimate

¹Ethics might also be defined to include the study of what *other* people think about this relationship.

goals, goals which are not equivalent to human welfare, but which are correlated with it in important ways. These penultimate goals might include peace, arms control, democratic values, and so on.² Military policy is then related to these secondary values, although one must never lose touch with the final goal of all moral activity--a better life for *people*.

This is a very broad view of ethics. Every decision about what one shall do becomes an ethical (moral) decision. There is a sense, of course, in which one may offer recommendations about human action without making moral judgments. One may recommend in a non-moral sense only if one is not actually advocating that the action be carried out. For example, when a military strategist advises a particular approach, he may be saying the strategy should be adopted *if the proper goal is for our side to win*. In this amoral, technical sense, Hitler "should" have used the most effective tactics available. In a moral sense, humanity would have been better off if he hadn't.

²Robert A. Levine has listed the following as values relevant to military policy: reducing the chance of war, melioration of war, not-killing, avoidance of Communist aggression, avoidance of Communist peaceful advances, avoidance of domestic militarism, avoidance of reactionary regimes abroad, anti-imperialism, winning a war, non-Communism abroad, and anti-Communism abroad. To this list might be added economic values, the promotion of international cooperation, the promotion of equality and human dignity, support for international law, and the furtherance of appropriate methods of decision-making. For the first list see Robert A. Levine, *The Arms Debate* (Cambridge: Harvard University Press, 1963), p. 96.

By this standard, any time we think reflectively on what we actually ought to do, we are reasoning from an ethical perspective. Some would define ethics more narrowly. For example, one often hears "ethics" used interchangeably with "altruism." This means that to contend for foreign aid on altruistic grounds is to present an ethical argument, but to condemn it because it wastes too much money is a "practical" argument. To me both arguments are ethical, since both depend on an analysis of what actually will be best for people.³

Quite a few laymen tend to use moral terminology with reference to extremes of rightness and wrongness. This is an outgrowth of the tendency of many Christian moralists to think in terms of absolute commandments and prohibitions,⁴ as well as the way that the terms "unethical" and "immoral" are used in common discourse. Both words are highly pejorative, and imply a slur on an individual's character. Thus we do not ordinarily call a policy immoral unless we are completely and unalterably opposed to it. The result of this usage is that ethics begins to connote absolute judgments of black and white, when the most troublesome choices are really between shades of gray.

Finally, writers on military policy often assume that ethics is

³Admittedly, a few thinkers might do ethics in terms of what is best for *some* people, and not consider others worthy of moral concern.

⁴Most modern Christian ethicists, however, have gone well beyond this mentality.

primarily concerned with specific moral virtues, such as honor, courage, mercy, and promise-keeping. Such virtues are important, both as a cause and a consequence of human actions, but there is far more to human well-being than possessing good character. In fact, virtue is desirable precisely because it promotes the well-being of the self and of others. I would therefore use ethical terminology more broadly than those who speak as if the implications of military policy for the various human virtues (and vice versa) are in some unique sense a moral consideration.⁵

II. ETHICS AND SOCIAL SCIENCE

To the extent that an individual reflects critically on the relationship between social policy and the quality of human existence, that individual is acting as an ethicist. Social scientists do this whenever they make policy recommendations, and in fact it may be that the best moral analysis of military policy is being done by such political

⁵For example, Herman Kahn, speaking of the ways one can make non-credible threats credible, writes, "The closest one can come to making the stand credible is to program it in a computer, to take a high *moral* position (saying, in effect, I would like to compromise but my integrity will not let me) or to look slightly mad." Herman Kahn, *On Thermo-nuclear War* (Princeton: Princeton University press, 1960), p. 290.

(Italics added.) Compare this statement by Glenn Snyder: It is possible to take measures that "would also set up a certain momentum in the direction of (nuclear) retaliation which the political organ would find *morally and psychologically* difficult to override." "Morally" evidently has reference to such virtues as honor, toughness, and keeping one's commitments. Glenn Snyder, *Deterrence and Defense* (Princeton: Princeton University press, 1961), p. 179. (Italics added.)

scientists as Philip Green.⁶ Nevertheless, ethics and social science are quite dissimilar. Ethics takes one far beyond an analysis of factual data. One must draw conclusions about the *relationship* of these facts to human needs and values. After trying to find out what a given policy will do to persons (factual analysis), one must determine what impact this will have on their welfare (ethical analysis). This additional task presents at least five problems over and above those of social science.

A concern for persons. Reference has already been made to the first difficulty; ethics must be related to persons. Most professional people have been trained to focus on rather impersonal goals, such as efficiency, peace, and the national interest. These are important as penultimate ends, but they must never obscure our final concern for man himself. For example, the search for economic efficiency must be checked constantly for unintended effects on human beings.

Conflicting ends. Penultimate goals are often referred to as *values*, since people place a certain value on that which generally proves conducive to the common good. Yet these values often conflict with each other, and this poses another serious problem. One must compare moral ends that are really quite incommensurable. Peace and

⁶See his excellent book: Philip Green, *Deadly Logic* (New York: Schocken, 1966).

freedom are both good for people, but "if peace is quantified by number of deaths avoided, how do we quantify the values associated with freedom? Working with a statistic like 'x degrees of freedom for y Berliners' would be sticky at best."⁷ Similarly, all men value both short-run happiness and long-run happiness. What if the two conflict? "Should we discount the future? There is simply no 'rule' of rationality on the subject."⁸

The limitations of our knowledge. Diverse values must be integrated, and diverse facts as well. The social scientist *qua* scientist is careful not to analyze too many facts at once. He will be criticized sharply if he takes on more than his methodology can handle. *The ethicist always takes on too much*, at least when he makes significant recommendations about American defense policy. National defense is related to human values in a variety of respects; somehow all the individual facts involved must be integrated into a unified whole. This whole may be radically altered by a single error in judgment, and the ethicist lives with the certain knowledge that he will make some really serious errors. The only way we can avoid such mistakes is not to decide, and this in itself is a decision. Furthermore, the choice to refrain from choosing usually means in practice that we support the status quo.

⁷Levine, *op. cit.*, p. 36.

⁸Green, *op. cit.*, p. 183.

Some writers imply that when top decisionmakers and governmental experts act as ethicists they are exempt from this difficulty; supposedly they have "the facts." It should be clear by now that the problems are so complicated that nobody has the facts. Elite decisionmakers have some facts that we don't but their ignorance is still most extensive. It is worth remembering that even the experts are experts in one or two fields only,⁹ and most politicians are not experts at all:

If we look away from the limited emergency to the broader operation to which the insiders are committed, such insiders as the President and the Secretary of State and the Secretary of Defense and other trusted advisers, I seriously question whether their judgments are determined, except in very limited areas of tactics and timing, as much as by the classified information or other specialized knowledge to which they have access as they are by their broad pictures of the world.¹⁰

Incomplete data. Often the facts which one needs in order to reach a conclusion are simply unavailable. The ABM controversy is no exception:

Different people make different assumptions about all these elements. That is what is involved in the argument

⁹"There is . . . the danger that one easily identified form of expertise may do duty for others. For example, those who know a great deal about the military aspects of a policy often dogmatize about . . . broader issues." *Ibid.*, p. 23.

¹⁰*Ibid.*, p. 22.

about anti-ballistic missile systems. One man's assumptions give one set of conclusions; another man's assumptions give a different set. Some of the assumptions are essentially indefinable. We are talking about things we do not and cannot know anything about no matter how we try.¹¹

Nevertheless, both sides of the controversy state their positions in extremely confident language. Such confidence is sometimes for the sake of persuasion, but often the individuals involved really believe in the correctness of their positions. Men want to believe that they really do have enough information to make sound judgments. One therefore allows himself to become ignorant of his own ignorance, and as Reinhold Niebuhr has commented, "his sin is never the mere ignorance of ignorance. It is always partly an effort to obscure his blindness by overestimating the degree of his sight."¹² Therefore it must be borne in mind that whenever my conclusions are stated in confident tones, this confidence is only valid if one shares most of my fundamental assumptions.

Subjectivity. Ethicists must relate policy to persons, must balance divergent values and integrate an incredible variety of factual

¹¹Jerome Wiesner, quoted by Hubert H. Humphrey, "The State of the Question, An Introduction," *ABM: Yes or No?* (Santa Barbara: Center for the Study of Democratic Institutions, 1969), p. 8.

¹²Niebuhr, *The Nature and Destiny of Man, I* (New York: Charles Scribner's Sons, 1941), 181.

materials, and must do all this under conditions of great uncertainty. Because of all these problems, a fifth must be added; every moral judgment is highly subjective. This is to say that one does not make a difficult decision by simply looking at the pros and cons and adding them up. More is involved than a clear-cut process of conscious reasoning. The whole person--reason and affect, consciousness and unconsciousness--must make these choices. This is a dangerous doctrine, and it ought to be spelled out carefully. Wholistic decisionmaking is not an appeal to arbitrary whim, transcendent emotion, or some mysterious power of intuition. It simply means that when we deal with problems for which there are no adequate intellectual tools, we must fall back on a subjective sense of what appears appropriate after careful reflection.

Admittedly, decisionmaking can be *too* subjective. On the other hand it is quite possible that one may make his mind operate with excessive "rationality," by overestimating the power of technical reason or underestimating the usefulness of the non-objective components of decisionmaking.

To oversimplify, the rational aspect of the mind consists of conscious reasoning processes; the non-rational involves emotional and unconscious factors. Emotion seems most essential to the ethicist. A man without feeling quickly loses touch with the human implications of military policy. Unconscious reasoning processes ought not to be written off either. Decisions about broad policy questions depend a great

deal on our general understanding of human existence. Certainly a very high proportion of the thoughts, images, and impressions that make up this understanding are hidden from our immediate awareness. Furthermore, the processes by which we have integrated these bits of data into a personal *Weltanschauung* have often taken place without our noticing them. Man has always developed a worldview in this manner. He could never have survived if the unconscious were wholly without wisdom. Today the temptation is to over-objectify, even to quantify the bases for decisionmaking.¹³ This temptation must be firmly resisted.

The subjective nature of moral evaluation makes it difficult for the ethicist to communicate his thought-processes to others. Levine illustrates the problem:

Perhaps the makers of recommendations should explicitly separate that which they consider first-order value judgment

¹³"Even so experienced a Washington hand as Dr. Jacoby, turning a skeptical economist's eye on the decision to put five billion dollars in the thin Sentinel ABM system, has . . . accepted the result because 'presumably the Pentagon has plugged figures into the equations, run the calculations, and reached an affirmative conclusion.'" Humphrey, *op cit.*, pp. 8-9.

¹⁴There is some reaction against the trend. Carl Rogers, for example, writes, "I have learned that my total organismic sensing of a situation is more trustworthy than my intellect." Carl Rogers, *Becoming a Person* (Boston: Houghton Mifflin, 1961), p. 22. Cf. Green, *op. cit.*, p. 259: "A judgment is an expression of belief based on one's entire training and experience, and is thus inevitably both 'moral' and 'analytical,' 'technical' and 'political,' 'subjective' and 'objective.' Cf. also Paul Tillich, *Systematic Theology* (Chicago: University of Chicago Press, 1963), III, 273-274.

from that which they believe to be deductible from the rest of the argument, but ordinarily they do not do so. Rather, the product of the value-times-probability multiplication, the over-all "importance" attached to that outcome, is all that can be extracted directly from most arms arguments. It is almost as difficult to guess the components of this product as it would be if a quizmaster were to say "twelve" and challenge a contestant to guess whether he meant two times six or three times four.¹⁵

The analogy is not quite perfect; the "quizmaster" himself may not know what the components of the product are. At best, he knows them only vaguely. Nevertheless, it would be helpful if even a vague understanding were made explicit.

In an age of precision technology, it is sometimes embarrassing to be an ethicist, as many are the difficulties and so limited the reliability of one's conclusions. Perhaps this is why social scientists often apologize when they go beyond their own disciplines and speak as reflective human beings. But man must choose, remembering the limitations of moral choice, and trying to compensate for them. If we understand the limitations, this paper will be seen as a *guide to reflection* about ballistic missile defense, rather than as a book of answers. I have tried to enhance its value by being as explicit as seemed practical about the way that conclusions were reached, so that the reader may retrace the path I have taken. Hopefully this will assist him in finding his own route.

¹⁵Levine, *op. cit.*, p. 65.

It is important to understand the limitations of ethical analysis. It is also important to press out against these limits by the reflective use of moral principles.

Normative analysis. Ethicists have traditionally been concerned with what might be called *norms* or *principles*. In my view, such principles would be unnecessary if our knowledge of the relation between human action and human welfare were absolutely perfect. One would simply work for the greatest good to the greatest number.¹⁶ Since our knowledge is so limited, however, guidelines must be developed for decision under uncertainty. A moral norm or principle is such a guideline.¹⁷ A norm is a *statement about the typical relationship*

¹⁶One would still encounter the troublesome problem of aggregate good versus distributive good. Should one aim primarily for the *greatest good* to the greatest number or greatest good to the *greatest number*?

¹⁷The approach to be described in the following paragraphs lies midway between "optimizing" and "maximizing." To arrive at conclusions by optimizing is to simply seek the best combination of consequences on the basis of one's knowledge. As Levine says, it involves the "attempt to resolve conflicts among competing values, measuring analytically the relative objective probabilities of their fulfillment by different policies, and then arriving at a policy recommendation which provides a 'best' combination of value fulfillments." This is the simple appeal to probable consequences; Levine notes that one of the major difficulties with the approach is that our knowledge of the probabilities is so imprecise. "Maximization," on the other hand, "looks for policies which provide the highest fulfillment of a relatively small number of noncompeting values." If one were to consider values associated with prevailing over Communism to have almost infinite significance, then other values (such as peace) would not have to be taken into account. Levine, *op. cit.*, pp. 32-40.

between facts and human values. In military policy this means a statement about the human consequences that typically flow from a given approach to national defense. Its logical form is as follows: usually in situation *X* policy *A* is better than policy *B*, so if in doubt, do *A*. Another form might be: almost *always* in situation *X*, *A* is far better than *B*, so if there is any doubt at all, do *A*. One might argue, for example, that almost all aggressive wars have been disastrous to human well-being. Therefore a heavy burden of proof rests on the man who advocates aggression. Similarly, some people say it has usually been bad policy to procure weapons when there has been no solid proof of their necessity.¹⁸ Therefore an ABM should not be procured unless it is clearly essential. Both of these are examples of moral norms, which state the typical relationship between facts and values in a specific kind of situation, and determine where and how heavily the burden of proof should be placed.

Norms are important not only because we are ignorant, but also because we underestimate our own ignorance. Because arms policy is so complicated, we are tempted to believe what we want to believe, rather than that which on more objective grounds would seem most probable. We rely too much on our own limited understanding. Since we are committed

¹⁸"Solid proof" is of course relative. This sort of language usually means the speaker wants proof to be more solid than it has been in the past.

to various principles of action, these principles can bring us up short when we would rather rationalize. This is especially important when each rationalization is likely to lead on to another (this is why many people oppose the first use of atomic weapons under almost any conceivable circumstances).

To further clarify the role of normative thinking, it may be helpful to use a quantitative illustration (Figure 1). Certainly this is *only an illustration*, and a very over-simplified one at that; the sort of moral mathematics involved is quite impossible in real life. Nevertheless, it may make the significance of moral norms more clear.

Let *A* and *B* represent the hypothetical ABM policies. The decision between them has an effect on two sorts of human consequences, the danger of nuclear war and the amount of money available for other purposes besides defense. (See Figure 1, page 24.) Each policy will increase the danger of war. *B* appears likely to increase it less, but only *A* can save us any money. If we could assign precise figures to our perceptions of probabilities and utilities, the outcomes might appear as in Figure 1.

In the case we are illustrating, *A* and *B* appear *subjectively* to be equivalent in their probable human consequences. These appearances, however, may be deceiving. In particular, it is quite impossible to estimate the probability of a nuclear war, and miscalculation would be more than tragic. We therefore establish a principle; a *very* heavy responsibility for proof rests upon anyone who would increase the danger

Policy A		Policy B	
Probability (Perceived)	Utility (Perceived)	Probability (Perceived)	Utility (Perceived)
Increase in the likelihood of nuclear war by a probability of .005 (five in one thousand)	Nuclear war has a disutility of (let us say) -1,000,000	B also seems likely to increase the danger of war, but this time by a factor of .002	Again -1,000,000
But policy A has an advantage; there is a .75 chance (three out of four) that it will save us money	In comparison to the disutility of nuclear war, let us say that the positive utility of the money we might save amounts to 4,000	Policy B will definitely not save us any money, nor will it cost us any more than at present. The net change is zero	
We add the disutility of the increase in the chance of nuclear war (.005 times -1,000,000 = -5,000) to the utility of saving money (.75 times 4,000 = 3,000) and arrive at an expected disutility of -2,000. Policy A will probably leave us worse off than before		We add the disutility of the increased danger of war (.002 times -1,000,000) to the zero change in amount of money saved. The total is, again, -2,000. Subjectively, both policies seem equally disadvantageous	

Figure 1
A simplified example of the use of normative thinking

of war. The effect of this principle is to increase the subjective disutility of any such policy. If the increase in subjective disutility were by a factor of 100, Figure 1 would be altered considerably. Instead of Policy A involving an expected utility of -2,000 ($-5,000 + 3,000 = -2,000$), the figures would be changed to $-500,000 + 3,000 = -497,000$. The disutility resulting from an increase in the likelihood of nuclear war has been multiplied by one hundred. Similarly, the figures for Policy B would change from $-2,000 + 0$ to $-200,000 + 0$. Now B seems by far the best policy; a normative principle has been introduced, with decisive effect.

It is worth noting that one may establish a burden of proof so heavy as to prohibit an act altogether:

There are some moral limits beyond which we should not go, regardless of any calculations . . . A Christian who understands the degrees of self-deception of which he is capable will stop before he allows the calculations that are the mark of responsibility to allow him to sanction or support the destruction of populations.¹⁹

This is not the same, however, as saying that the act is wrong "in itself," or that it has some "evil essence." The concern is still for

¹⁹Bennett, *op. cit.*, pp. 122-123.

for human consequences.²⁰

III. AN UNDERSTANDING OF THE INTERNATIONAL CONTEXT

Since moral principles are so important, it would seem fitting to state clearly the underlying normative assumptions of this study. One encounters a dilemma, however. A highly specific list of norms tends to be extremely dry; a more general discussion tends to be meaningless. It is fine to go on record as favoring peace, democracy, security, and love, but so does everyone else. The important question is, what are one's priorities in practice? These priorities can be illustrated by describing one's overall understanding of the present world situation.

First of all, I do *not* see the current global context as primarily a struggle between Communism and the free (i.e., non-Communist) world. Communism certainly has imperialistic tendencies, but it does not represent the primary threat to human well-being. The Soviet Union

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In light of the last few pages, it is interesting to consider a remark made by Thomas Schelling, speaking of Joseph Fletcher's belief that we ought to try to quantify the consequences of moral action: "Fletcher is right in insisting that we have to try, but where we think we are terribly fallible, we might be wise to settle for an arbitrary rule instead." Thomas Schelling, "Game Theory and the Study of Ethical Systems," *Journal of Conflict Resolution*, XII (March, 1968), p. 38. One might add that we are "terribly fallible" a great deal of the time, that moral principles are useful even when we are only somewhat fallible, and that such principles ought to be based on human experience rather than being arbitrary in the pejorative sense.

pays lip service and a little more to the ideal of world revolution. Yet as subsequent sections will show, her strategic weapons policy has seldom looked like a dedicated quest for dominance. The Chinese share the revolutionary creed, as well as the Russian reluctance to give their words the force of action. Their pronouncements are militant, but their army is almost entirely oriented toward defense:²¹

The plain fact of today is that China does not possess the capability of expansion on any frontier. Whether there is an expansionist urge is beside the point. Peking might or might not want to expand, but it lacks both opportunity and power. And in a power world it is capability, not wish, which counts.²²

Furthermore, "A close look at the insurgencies of Thailand, Burma, and India, all within easy reach of Chinese power, discloses an amazingly small effort by Peking."²³

In addition, both nations have suffered foreign policy setbacks in the Third World. The Chinese, for example, carry a sense of cultural

²¹Yuan-li Wu, *et al.*, *Communist China and Arms Control* (Palo Alto: Hoover Institution, 1968), p. 45; cf. Morton M. Halperin, "After Vietnam: Security and Intervention in Asia," quoted by editors of *Bulletin of the Atomic Scientists*, XXV (February, 1969), 57.

²²Joseph C. Harsch, "Why U. S. and Peking Began to Chat," *Christian Science Monitor*, LXII (Weekend Issue, January 10-12, 1970), 1.

²³Allen S. Whiting, "Time for a Change in Our China Policy," quoted by editors of *Bulletin of the Atomic Scientists*, XXV (February, 1969), 26; cf. C. P. Fitzgerald, "Foreign Policy: A Revolutionary Hiatus," XXV, (February, 1969), 54.

superiority analogous to racism. This arrogance costs them many friends, and relations with neutral nations have deteriorated in recent years.²⁴ Finally, even when nations have become Communistic, they have generally followed independent policies unless they share a common border with the Soviet Union. The major problem does not seem to be the sweeping tide of Marxism. The major problem is the lack of cooperative solidarity between nations.

Estrangement is characteristic of the human condition, and is especially typical on the international level. Countries normally have significant degrees of empathy only for their allies. The rest are viewed with relative indifference or hostility, both of which are marks of estrangement. Neutrals are eyed with deep suspicion, and one's enemies seem less than human. Nations certainly vary in their capacity for empathy, but America's attitude seems fairly typical--better than some, worse than others.

Estrangement involves fear and hostility, both of which are obstacles to international understanding. These feelings are doubtless justified in some situations, but they nevertheless lead one to perceive in rigid, uncreative stereotypes that make the other side seem worse than it actually is.

Fear and hostility also lead to belligerence. International man

²⁴Fitzgerald, *op. cit.*, p. 58.

is an international animal, and animals respond to danger by fighting or fleeing. Since man can reason, he can arrive at more constructive alternatives, but he places far too much trust in the simple fight/flight orientation. This has been true throughout history:

Warfare was for centuries the main social enterprise, absorbing virtually all the community's surplus time, energy and resources. "History," William James said, "is a bath of blood. To hunt a neighboring tribe, kill the males, loot the village and possess the females was the most profitable, as well as the most exciting, way of living."

Then, roughly 100 years ago . . . the rules changed. Within about a century--a mere eye-blink in terms of evolutionary development--the traditional outlets for violence closed up. Fighting suddenly became intolerable.

One reason was the industrialization of war. It not only made warfare ruinously expensive; it took all the fun out of it.²⁵

We have hardly begun to shake off this martial heritage. Seventy per cent of the 1970 Federal budget goes for war--war past, present, and potential.²⁶ Less than one one-hundredth of one per cent is allocated to the Arms Control and Disarmament Agency. Our fundamental approach to the Communists is to frighten them, frustrate them, and anger them. As an occasional short-run tactic, threats may sometimes

²⁵ John Fischer, "What Young Men Need: A Substitute for Violence," *Reader's Digest*, XCII (March, 1969), 83.

²⁶ I. F. Stone, "Uncle Sam's Con Man Budget," *I. F. Stone's Weekly*, XVII (May 5, 1969), 2.

be appropriate. As a long-run strategy, the cycle of hostility almost inevitably rises to the flash point. Herman Kahn has predicted a small nuclear war within this century, with a massive nuclear exchange quite possible after that.²⁷ His estimate does not seem overly pessimistic.

Fear sometimes makes us fight, but sometimes it makes us run away. This seldom takes the form of appeasement for the United States. America usually flees from a courageous estimate of international realities, rather than from the enemy. Our army is strong; it can fight. Our ability to face facts is not so strong, especially if the facts cast doubt on the efficacy of military toughness. We screen out problems that have no military solution (world poverty), or screen out the *fact* that they have no military solution (Vietnam).

The two forms of estrangement, indifference and hostility, both lead to selfishness. The greater the estrangement, the less are citizens of other nations seen as valuable persons. Furthermore, the less we care about them, the more we can rationalize hoarding what we want for ourselves. America hoards her wealth, her power and her sense of righteousness. Hording wealth means imagining that it is perfectly appropriate for us to consume half of the world's goods and services. Hoarding power means that our ships and soldiers maneuver up to the very borders of China, while China is condemned for expansionism.

²⁷"Bigger Wars Ahead?" *U. S. News and World Report*, LXII (June 7, 1965), 47.

Hoarding righteousness means believing we have earned our position, rather than having chanced upon it by the transient accidents of history. The entire syndrome of American greed is epitomized by the words of Lyndon Baines Johnson:

There are three hundred billion people in the world, and we have only two hundred million of them. We are outnumbered fifteen to one. If might (sic!) did make right, they would sweep over the United States and take what we have. We have what they want.

.....

We have had to show it couldn't be done in Korea. We may have to show it can't be done in other areas of the Pacific. We are showing right now it can't be done in Vietnam.

.....

We don't ask for much, but what we ask for we are going to get, we are going to keep, we are going to hold.²⁸

America is certainly not an unusually selfish nation. There are many others who would use our power far less responsibly. Most nation-states *are* self-centered, and short-sightedly so. This selfishness leads to vast inequalities of power and of living standards, and it does not seem likely that much will be done about either by those who are in positions of leadership. The tragedy of American race relations sets a sobering precedent. In almost every respect, the chances for racial justice in the 1950's were better than those for international

²⁸ Johnson, "The President's Remarks to Troops and Speech to Korean National Assembly," *New York Times* CXVI (November 2, 1966), 16.

justice today. The inequalities were less serious, the have-nots were more visible, the bonds between classes were stronger, and the necessary commitment of resources was far less extensive than is the case with poverty and powerlessness on a world scale. But the trickle of funds to the black community only became a larger and more widely-discussed trickle, even under the threat of all-out revolt. As the mass media carry images of affluence into more and more villages,²⁹ the black rebellion may well be replicated around the globe; the potential for violence is almost unbelievable.

Note that because each nation acts out of short-run selfishness, it tends to screen out the possibility of temporary sacrifice for long-range cooperative gain. It is precisely such sacrifices that are absolutely essential. Furthermore, our reluctance to act is also fed by the assumption of our own virtue; it is the rest of the world that really needs to change.

Estrangement, fear, belligerence, selfishness, and inertia all interact to frustrate human progress. Admittedly, the situation could be (and may become) much worse. At least the world can operate with a tentative and tenuous order which places limits on violence and

²⁹*Siempre!* of Mexico City complains that television in Mexico has "only created a feeling of inferiority among the common people as they compare themselves to the few who are wealthy." "Triumph of the Idiots," *Atlas*, XVII (March, 1969), 42.

exploitation. But this is certainly not enough. It is absurd that so many humans are deprived of life, dignity, and sustenance by the web of destructive policies in which the world is enmeshed. One wishes the web could be torn open by simply "getting tough" or "being reasonable." One wishes for the certainty that there really are solutions, and that if there are, we will not be so devoted to our blinders that they will simply pass unnoticed.

This is the human situation. It is nothing to be alarmed about, unless one feels some concern about the future of mankind. If such a concern exists, the result should be an absolute obsession with world peace and worldwide equality. Any analysis of American defense policy must keep these two goals constantly in view.

Almost none of the points made in the last few pages are provable, and many will disagree with them. The same could be said of anyone's overall understanding of international relations, and every person who evaluates the ABM must work from such a general perspective. One hopes that to frankly state these presuppositions will help to clarify those occasions on which a disagreement between the reader and me grows out of a disagreement about the overall situation of man. In addition, to realize that a difference rests on unprovable impressions about the human condition is to become less confident about the reliability of our own individual judgments. The limitations of our perspective may be thrown into sharper relief, and we may therefore be rightfully humbled.

CHAPTER III

DETERRENCE AND THE ABM

The next three chapters are interrelated on many levels, since each of them deals with the prevention of war and the mitigation of its potential effects. Minimizing the short-run risk of war is the primary subject of Chapter III, which relates the ABM to American deterrence policy. Chapter IV deals with the ability of missile defense to limit damage should an attack ever come. The subsequent chapter, "Prospects for Arms Control and Disarmament," is concerned with the long-run danger and destructiveness of war, since the significance of these long-run risks will be largely determined by the success of attempts at arms limitation.

I. DETERRENCE

The meaning of deterrence. The nuclear balance of terror is history's most momentous gamble. To prevent the Soviets and the Chinese from either attacking America or endangering our vital interests, we threaten to kill tens of millions of innocent human beings. Missile defense must be understood in the context of the human implications of such a threat, but unfortunately our minds are far too unimaginative to grasp the meaning of a hundred million deaths. Such a tragedy might in a very abstract way be compared to events of similar magnitude. But genuine *understanding* is impossible. It is possible, however, to sense

with increasing clarity how monstrous an act it is that we are contemplating. The more one realizes this, the more one's analysis of deterrence must be permeated with a sense of horror.

For some ethicists, to enhance our own security by threatening to incinerate an entire nation is immoral on the face of it. It cannot possibly be justified. Paul Ramsey, for example, believes that to deliberately and directly destroy innocent civilian lives is immoral under any conceivable circumstances.¹ Since this study is not based on an ethic of absolute rules, the possibility must be faced that keeping the peace through nuclear arms may be the least undesirable option available.

The major alternative to the balance of terror is multilateral disarmament. Against this alternative it is argued that since inspection procedures are far from foolproof, one nation might cheat on the agreement and conquer the world. Such an eventuality is said to be

¹Paul Ramsey, *War and the Christian Conscience* (Durham, North Carolina: Duke University Press, 1961), passim.

²Unilateral disarmament is an option that will not be discussed in this study, although I find many of the arguments for this position extremely persuasive. It is possible that an increase in the perceived danger of nuclear war would force me to reject deterrence, even as a bridge to multilateral disarmament. My differences with the unilateralists center around the assessment of the short-run danger of war, the possibility that some nations would become expansionistic if containment were abandoned, and the deficiencies of non-violent resistance in coping with such expansionism. My own strategy would be to spend the next few years in working for arms control and/or disarmament, as well as in building the kind of society in which unilateralism would be feasible should these efforts fail.

comparable in seriousness to the horror of nuclear warfare. Even if such a conquest were thwarted, a breakdown in any major disarmament agreement would make arms control impossible for many decades to come. Policy makers and publics alike tend to rely very heavily on oversimplified historical analogies (e.g., Munich), and the failure of one agreement would make us extremely reluctant to run the same risk twice. Psychologically we would be locked into a strategy of deterrence, with all the evils which that entails. These arguments have *not* been advanced to build a case for deterrence, but rather to show that both deterrence and disarmament involve terrible risks. Both the advocate of deterrence and the advocate of multilateral disarmament carry very heavy burdens of proof. To determine how well these burdens are carried constitutes part of the purpose of Chapters III, IV and V. I will finally conclude that disarmament involves far fewer risks than deterrence, even in the fairly near future. Deterrence is acceptable only as a transition to a complete or near-complete phaseout of offensive nuclear weapons.

Strengths and weaknesses of deterrence policy. To understand whether or not deterrence is a viable policy, and to provide a backdrop for the discussion of deterrence and the ABM, one must understand some of the assets and liabilities of relying on the balance of terror. The assets make such a balance tend toward stability, and the liabilities toward instability.

To begin the list of assets, those nations that possess nuclear

weapons have been fairly cautious and conservative. This is true even of China. Of course, no one knows how long this situation will continue.

A second decisive factor is the growth of the capacity for delayed response to a nuclear attack on the part of the two major powers. This means our weapons are so "hard" (Minuteman missiles in concrete silos), or so well hidden (Polaris/Poseidon submarines) that we could absorb the full force of an initial enemy attack before deciding whether or not to retaliate. The minor nuclear powers do not possess this capability, but the fact that Russia and America do lends stability to the overall balance.

One final factor is often overlooked. To calculate the possible success of an all-out nuclear attack involves the most incredible complexities and uncertainties. Because of the dreadful consequences of a wrong calculation, this forces any rational decisionmaker to put plenty of margin for error on top of the already enormous margin he would need for victory. Over against these stabilizing factors must be set several forces that make war more and more likely as the years go by.

First of all, consider the related problems of escalation and pre-emptive war. If two nuclear powers become embroiled in conventional warfare, hostilities may escalate to the point where one side expects an all-out attack from the other; it might therefore decide to strike first. Alternatively, one country may fear that the other is thinking in such terms, and decide to pre-empt the pre-emption. It is

argued, for example, that in a crisis China might become convinced that if she did not strike America she would soon be devastated anyway. This has been a primary argument for ballistic missile defense.

To this problem must be added the possibility of irrational leadership in one of the nations involved. "The likelihood of rational decision making . . . in any kind of serious war in the nuclear age," writes Klaus Knorr, is a "problem about which . . . next to nothing is known."³ Control of nuclear weapons by another Adolph Hitler would involve some terrifying risks, but the problem of irrationality extends far beyond such an extreme example. In a crisis, almost any human being becomes moderately insane. The great psychotherapist Harry Stack Sullivan maintained that even relatively minor crises lead to:

a considerable degree of imperception, an arrest of constructive, adaptive thinking, and a high degree of suggestibility to almost anything that seems simple and a way out of the difficult situation. There is complete insensitivity to elaborate, difficult suggestions; but the person is relatively impotent to ward off or resist any simple idea that is given to him.⁴

This is precisely the sort of psychological climate that could lead from escalation to further escalation, and finally to preventive war.

In addition, there is a serious threat that unauthorized nuclear detonations will take place, and not necessarily during a crisis. Such

³Klaus Knorr and Thornton Read (eds.), *Limited Strategic War* (New York: Praeger, 1962), pp. 24-25.

⁴Harry Stack Sullivan, quoted in John R. Raser, "The Failure of Fail-Safe." *Trans-action*, VI (January, 1969), 13.

explosions could result from either mechanical malfunction or from a breakdown in command and control. Nobody knows how much danger there is of a nuclear weapon's exploding by accident, but the most elaborate unclassified study available estimated that the chances of an *American* nuclear weapon exploding during the 1960's from "essentially mechanical malfunctions" was approximately one in one hundred.⁵ It is completely impossible to estimate the chances of such an explosion in arsenals of other nuclear powers. None of them ever mention their nuclear safety programs.⁶

Smaller nations--even France--have little or no knowledge of the immensely costly and complicated fail-safe system developed by the major powers to guard against inadvertent or unauthorized use of nuclear weapons.⁷

An accident of this sort would probably involve only one nuclear explosion, and it is to be hoped that this would not panic the nuclear powers into assuming an all-out attack was under way. The tendency toward panic would be far greater if several or many detonations were involved. Such might be the case if the attack resulted from a breakdown in command and control. Perhaps some day a nuclear power will

⁵David E. Cummins, *et al.*, *Accidental War: Some Dangers in the 1960's* (Columbus: Ohio State University Press, 1960), pp. 8-9.

⁶Joel Larus, *Nuclear Weapons Safety and the Common Defense* (Columbus: Ohio State University Press, 1967), p. 10.

⁷"Nuclear Proliferation: Status and Security," *Time*, LXXXVI (July 23, 1965), 30.

experience internal chaos, during which irresponsible parties gain access to major nuclear delivery systems. The potential for such chaos in China, for example, is not to be entirely discounted. Even without civil strife, regularly appointed officials with power over fairly large numbers of hydrogen bombs might choose to attack another nation. It seems virtually impossible to eliminate this danger. The Pentagon's Human Reliability Committee has concluded that there are no promising means of assuring that only mentally healthy soldiers received access to nuclear weapons facilities.⁸ The dangers can be minimized, but America has not always shown a firm commitment to even a moderate degree of prudence. In 1959, for example, Congressman Charles O. Porter was visiting a Thor IRBM base in Feltwell, England. Two keys were necessary to fire these weapons; one was to be kept by a Royal Air Force officer and one by an American. Porter found that the RAF officer had the American's key!⁹ When he tried to convince the Department of Defense that this was a dangerous situation, he met with "indifferent success."¹⁰ A congressional subcommittee in Turkey later found that the American there had the proper key to our Turkish IRBM's. But

⁸Larus, *op. cit.*, p. 75.

⁹*Ibid.*, p. 81.

¹⁰*Ibid.*, p. 82.

as one member commented:

We wondered what would happen if, for some reason--two NATO allies falling out, perhaps--the Turk decided to overpower our man and take away his key? Why the Turk would have himself quite a modern weapon, that's what.¹¹

Furthermore, Clinton P. Anderson, Chairman of the Joint Committee on Atomic Energy, said that the Committee

found that the Department of Defense had been concealing some "custody" arrangements which raised grave questions as to their legality under the Atomic Energy Act, as well as serious problems of possible unauthorized use or accidental detonation.¹²

If America has run such serious risks, there is no reason to believe that other nuclear powers of the present and future will be more responsible. When the dangers of a breakdown in control are added to the other problems listed above, the risks of relying on nuclear deterrence becomes painfully clear. Most important of all, *these risks will increase with the passage of time*. Other things being equal, the longer we live under the Damoclean sword, the greater the risk of catastrophe. Furthermore, the spread of nuclear weapons will markedly increase the risk of war due to escalation, irrationality, and unauthorized nuclear explosions. "The general long-term problem . . . might eventually involve all but the smallest countries."¹³ Furthermore the more nations that have weapons, the harder it will be to negotiate a disarmament treaty. The conclusion to be drawn is that to

¹¹ *Ibid.*, p. 82.

¹² *Ibid.*, p. 83.

¹³ Leonard Beaton, *Must the Bomb Spread?* (Middlesex, England: Penguin, 1966), p. 17.

rely on deterrence indefinitely will be absolutely suicidal.

II. DETERRENCE AND THE ABM

Is the deterrent in danger? The primary argument for Phase I of Safeguard is that it would enhance our deterrent during the 1975-1980 time period. It would do this by making it more difficult for the Soviets to knock out our land-based missiles in a first strike. One fundamental question, of course, is whether our deterrent is likely to *need* defending.

Secretary of Defense Melvin Laird argues that if the Soviets continue to build SS-9 ICBM's at the present rate, they *could* produce five hundred by 1975. (Preparing for what the Soviets *could* produce led to the bomber gap of the 1950's and the missile gap of the 1960 campaign. Neither gap ever materialized.) *If* they can develop three MIRV's for each rocket, and *if* these have both high accuracy and high reliability, SS-9's could carry a total of fifteen hundred re-entry vehicles. These could then attack America's one thousand fifty land-based ICBM's. (They would also have several hundred smaller and less accurate SS-11's and SS-13's which could be used to attack other targets.) Laird also contends that by 1975 the Soviets *may* have made great advances in anti-submarine warfare, enabling them to destroy our Polaris force. Further, it is possible that they will have missile submarines that can come close to our shore line and fire rockets at our bomber bases from such a short range that all of our bombers would be destroyed before they

had time to take off.¹⁴ There is no consensus that any of these threats will materialize, much less all three at once. Nor is it clear that our far-flung offensive forces could be destroyed *simultaneously*, particularly our nuclear submarines. In short, to imagine that the Russians could count on having developed a first strike capacity within the next ten years is to imagine the most extreme threat short of an invasion from outer space. The doctrine that American procurement policy should be based on such a remote possibility is frequently referred to as *worst-case reasoning*.

Worst-case reasoning is not an invention of Secretary Laird. In a less exaggerated form, it has been a fundamental axiom of defense policy for many years. In the field of conventional warfare, our planners have assumed that America should be prepared to fight a land war in Europe, a land war in Asia, and a brush fire war some place else, all at the same time.¹⁵ In strategic defense policy they have focused their attention on what is technically referred to as the *greater than*

¹⁴To say that our deterrent would be threatened under even these circumstances assumes the Soviets could also blind our radar and neutralize our seven thousand tactical nuclear weapons in Europe.

¹⁵Jonathon B. Bingham, "Can Military Spending Be Controlled?" *Foreign Affairs*, XLVIII (October, 1969, 54-55.

*expected threat.*¹⁶ Each year the Secretary of Defense delivers two separate sets of national intelligence estimates to Congress. One is the highest expected threat, derived from intelligence agencies' estimates of the greatest strategic challenge to America that seems likely over the next five years or so. Note that this is not the threat that will probably emerge, but rather the worst that is likely--and the worst in *every single area* of strategic weaponry. An estimate considerably in excess of even *this* prediction is then delineated--the greater than expected threat. America then prepares to counter even this extreme possibility. As a result, weapons such as Phase I of Safeguard are recommended as being absolutely essential.

No clear rationale has been developed for worst-case reasoning. Usually, it is enough to invoke the old incantation that we must "err on the side of the national security of this country,"¹⁷ with national security being tacitly equated with military power. Such an approach is fundamentally unsound. First of all, if we accept worst-case reasoning in military policy, we ought to accept it in other areas as well; Communism is not the only threat to life as we presently know it. In fact, worst-case reasoners in other fields have argued that

¹⁶*Hearings on Military Posture*, (Robert S. McNamara testifying,) 90th Congress, 2nd Session, House Committee on Armed Services (Washington: Government Printing Office, 1968), pp. 8507-8508.

¹⁷*Intelligence and the ABM*, (Melvin Laird testifying), 91st Congress, 1st Session, Senate Committee on Foreign Relations (Washington: Government Printing Office, 1969), p. 63.

pollution, cybernation, big government, and/or student radicals pose such serious challenges that unless we respond to them immediately and drastically the things we value in American life will soon be completely destroyed. If we followed such pessimistic advice, we would probably have to double or triple the federal budget overnight (or virtually eliminate it, if the position of worst-case conservatives were accepted). In the second place small risks of great disaster must be weighed against large risks of a somewhat less serious nature. To use a simple illustration, suppose a man comes to a fork in the road and knows if he turns right there is a one in one thousand chance of losing one hundred dollars. If he goes left, however, he will definitely lose ten dollars. Most of us would choose to avoid the certain loss, and in the long run this strategy would save us a great deal of money. The minute possibility of a successful Soviet attack must be weighed against important threats to the quality of living which we *know for a fact* have materialized. Not the least of these is the threat which the arms race is posing to world peace and to prospects for eventual disarmament. Building our weapons system to counter a greater than expected threat is one of the most fundamental fallacies in American defense policy.

An alternative to worst-case reasoning. What is required is a new set of criteria. I would propose that the highest expected threat is accepted as the starting point, even though this estimate tends to be unnecessarily pessimistic. After a set of appropriate responses to this threat has been determined, the problem of other national

priorities and the many disadvantages of military spending should be taken into account. Our forces might be caught short *should* the highest expected threat materialize *and* the Soviets chose to be extremely belligerent, but such a policy would leave extra money for other critical problems and would also slow down both the arms race and the militarization of American society.

The highest threat which America will probably face from 1975 to 1980 does not begin to justify Safeguard. First of all, there is no reason to suppose the Soviets will discover a means of blinding American radar. To imagine that they would strike first without such a capability, in full awareness that America could retaliate before Soviet ICBM's had ever landed, is to assume a high degree of derangement on the part of Soviet officials. (As will become clear in a subsequent section, Safeguard would not place any major obstacle in the path of a Soviet first strike. The additional complications it might create would certainly not be enough to deter an irrational policy maker.) Nor does it seem reasonable to assume that Soviet attack boats will be so sophisticated as to be able to destroy all of our Polaris and Poseidon submarines at once. If *one* Poseidon escaped destruction long enough to fire, up to one hundred sixty Soviet targets could be attacked. Even Deputy Secretary of Defense Packard has admitted that Polaris/Poseidon is expected to be "highly survivable" until at least the

late 1970's.¹⁸ The argument is reinforced by Rear Admiral Levering Smith, Director of Naval Strategic Systems Projects, who is "quite positive that the new generation of Russian subs that are getting close to operational status . . . will . . . not be able to follow our Polaris subs."¹⁹ The new Soviet boats turned out to be a good deal louder than Polaris. In other words, we can hear them (and take evasive action) before they can hear us.²⁰ It is somewhat more plausible that a science fictionesque breakthrough could enable the Soviets to disrupt communication between America and her submarines. Even so, our subs would be able to determine whether or not an attack had definitely taken place. Most obviously, they could sail into a convenient port and ask somebody! If their suspicions were confirmed, the Soviet Union could be devastated.

On the basis of this one deterrent alone, Safeguard would seem to be unnecessary. There is also a very good chance that the Soviets would be intimidated by our tactical weapons in Europe, our bombers, and our land-based ICBM's. The arguments about the invulnerability of each of these systems are extremely complicated, and the unclassified literature on bombers and tactical nuclear warheads is so sketchy that

¹⁸*Ibid.*, p. VII.

¹⁹*Ibid.*, pp. 65-66.

²⁰William Beecher, "New Soviet Subs Relatively Noisy, Easy to Detect," *New York Times*, CXIX (October 9, 1969), 12.

I myself have come to no clearcut conclusion. There is a great deal of information available, however, about the Soviet threat to our land-based missiles. According to Department of Defense calculations, it is possible that the Soviets might develop an SS-9 force with sufficient numbers, reliability, and accuracy to eliminate perhaps ninety-five per cent of our Titans and Minutemen.²¹ (That still leaves fifty to fifty-five, each with from one to three hydrogen warheads.) As far as numbers are concerned, there is strong evidence both for and against assuming that the Soviets will build five hundred or more SS-9's. On the one hand, about two hundred fifty have been built in the last three years.²² On the other, two hundred fifty more would cost around seven billion dollars.²³ One must emphasize that SS-9 deployment has not resembled a relentless march toward overwhelming superiority. The Soviets actually stopped building them in early 1968, and decided to build more a few months later.²⁴ (Some of the very legitimate reasons why they may have wanted a strong SS-9 force will be discussed in Chapter V.) It is difficult to imagine what point there would be in

²¹*Strategic and Foreign Policy Implications of ABM Systems, II* (Jerome Wiesner testifying), 91st Congress, 1st Session, Subcommittee of Senate Committee on Foreign Relations (Washington: Government Printing Office, 1969), p. 492

²²Johan J. Holst and William Schneider, Jr., (eds.), *Why ABM?* (New York: Pergamon Press, 1969), p. 166.

²³*Intelligence and the ABM* (Melvin Laird testifying), p. 35.

²⁴Holst, *loc. cit.*

building two hundred fifty more. Since Polaris/Poseidon makes it virtually impossible to nullify the American deterrent, such an excess amount of striking power would seem an egregious waste of scarce resources. It is also unclear that the Soviets can develop the requisite reliability and accuracy during the 1970's. The Department of Defense has estimated that they can (and has drawn the conclusion that they will). The prediction is that if the SS-9 is given three MIRV's, each RV will have a .95 probability of destroying one Minuteman. Accuracies on the order of one-fourth mile would be required for such a feat.²⁵

Hans A. Bethe's analysis is persuasive:

An accuracy of .25 miles . . . is certainly possible according to the laws of physics. But to achieve this, they would have to make very major modifications in their guidance system, in their system of deploying the MIRV, and in the design of the re-entry vehicle. All these developments are possible but each of them would require a lot of testing and therefore a lot of time. In order to have this accuracy in all their SS-9's they would have to retrofit their entire force.²⁶

It is possible that ninety-five per cent of our land-based missiles could be eliminated by 1975 or 1976, but it seems much more plausible to push back the date until the late 1970's. Phase I of Safeguard could be delayed, even if it were true that a threat to Titan Minuteman would constitute a threat to our entire deterrent posture.

²⁵*Strategic and Foreign Policy Implications. . . , II, p. 600.*

²⁶*Ibid.*

If the worst should happen. Given the unlikelihood of simultaneous Soviet destruction of our radar, submarines, bombers, tactical weapons, and land-based missiles, a defense of the deterrent seems superfluous. Even if it becomes necessary, however, Safeguard would be a most inappropriate alternative.

In order to seriously threaten our retaliatory force, the Soviets would need luck, commitment, and tens of billions of dollars. If they were so incredibly determined, how much of an additional obstacle would Safeguard place in their path? In simple terms, how much money would they have to spend to compensate for Phase I of Safeguard? The answer is, absolutely nothing.

The SS-9 is not the only Soviet missile. They also have several hundred SS-11's and SS-13's. These are not capable of destroying our ICBM's with any degree of reliability, but they would be quite effective in knocking out our Safeguard radars.²⁷ If the radars went, the systems would be useless. Even if the radars were not destroyed, defending them could easily exhaust the supply of ABM's. The total number of Spartans and Sprints in Phase I would be approximately four hundred.²⁸ SS-11's alone could easily exhaust this supply, even if,

²⁷ Abram Chayes, *et al.*, "An Overview," Abram Chayes and Jerome Wiesner, (eds.), *ABM: An Evaluation of the Decision to Deploy an Anti-ballistic Missile System* (New York: Signet, 1969), p. 40.

²⁸
Ibid., pp. 45, 95 and 96.

contrary to everyone's expectations, the ABM worked perfectly. The SS-9 could then go to work on our ICBM silos. Safeguard would not defend the deterrent.

Fortunately, there are other alternatives that might prove far more effective, including mobile missiles and undersea rockets in the Great Lakes. By far the most impressive alternative, however, is the air-borne alert, which would mean keeping part of our strategic bomber force in the air at all times. Each bomber would carry a ten megaton payload.²⁹ Defense against bombers has been pitifully ineffective, and there seems to be no prospect that this situation will be significantly altered. An air alert would constitute a real defense of the deterrent. Furthermore, it would not be required until we were much more certain that the deterrent would one day be in jeopardy. This would certainly help slow down the arms race.

The only objection is cost. At Dr. Edward Teller's estimate of two billion dollars per year, an aerial alert would cost up to ten billion dollars during the period from 1975 to 1980.³⁰ Phase I of Safeguard is estimated at between two and three billion dollars. Even if this cost estimate is correct, the bomber strategy would be *likely* to save us money, since it probably would never be needed. If a gambler

²⁹*Ibid.*, pp. 82-83.

³⁰*Strategic and Foreign Policy Implications . . .*, II, 521.

were offered a certain loss of two dollars or a one in one hundred chance of losing ten dollars, which would he choose? The answer is obvious, and I doubt that there is even a one in one hundred chance that we will need a full-time alert. Even a worst-case analysis refutes the desirability of Safeguard.

Detering China. Until now, deterrence has been related only to the Soviet Union, but China must also be considered. Specifically, China might attack America out of desperation if she were convinced that the United States was about to destroy her entire force of ICBM's. Safeguard would allegedly deter such an attack. Obviously such an eventuality is most unlikely, assuming a half-way rational Chinese government. One finds it hard to imagine a situation in which they would feel absolutely certain that America was going to strike first. They realize full well that if they chose to pre-empt such a strike, huge areas of China would probably be incinerated in response. A Chinese first strike would be thinkable only if their government felt absolutely driven to the wall with nothing to gain but blind vengeance. Safeguard would not be likely to deter under such circumstances. It might prevent an attack if the Chinese were firmly convinced that the shield was virtually impenetrable. For reasons that will become evident in Chapter IV, the ABM will be penetrable in a variety of respects, and the Chinese are aware that this is the case. The chances are remote that such a desperate situation will arise, and it is even more improbable

that Safeguard would be useful if it did.³¹

III. DETERRENCE AND AMERICAN POWER

As was mentioned at the beginning of this chapter, deterrence has two primary uses. It is intended to prevent a surprise attack and to guard against threats to interests which the United States government perceives as being vital. Our interests are allegedly protected by the manner in which nuclear weapons provide greater relative freedom of action for American military forces. They might do so by inhibiting the freedom of an adversary or potential adversary, or by enlarging our own area of maneuver.³² The Cuban missile crisis provides the classic example. We took a "tough" stand, at a time when America had overwhelming superiority. It is contended that this superiority forced the Soviets to back down. The RAND Corporation's Thomas Wolf therefore concludes:

U. S. interests would suffer in a strategic environment in which American primacy is widely questioned, even though the Soviet Union may not have clearly gained the upper hand. U. S. diplomacy would enjoy a much less comfortable freedom

³¹It is also argued that the Chinese might blackmail us by threatening an attack even if they were not intending to do so. Once again, Safeguard would eliminate the threat only if it were perceived as being virtually impenetrable.

³²"The ABM is . . . critical in terms of its ability to influence the initiation of offensive action by *our* forces (both nuclear and conventional)." Robert Rothstein, "Reflections on the ABM Decision," *New Republic*, CLX (March 22, 1969), 20-21.

of action than in the past, and the element of uncertainty in crisis situations would probably become much more severe.³³

Hence the arguments by our Joint Chiefs of Staff for a return to the "Cuba power environment."

Safeguard will supposedly be desirable because it will enhance American power. This rationale rests on two very questionable assumptions, the first of which is that in a crisis strategic preponderance *can* be translated into usable influence. Our nuclear monopoly after World War II did not enable us to keep the Soviets from putting pressure on Berlin and from supporting aggression in Korea. As far as the missile crisis was concerned:

It was easy for the United States to bring its conventional forces to bear on that situation and extremely difficult for the USSR to do so. Strategically, it was much more important to the United States than to the Soviet Union . . . The United States also had vast nuclear superiority at the time of the suppression of Hungary by the Soviet Union, and yet it could not affect the outcome because the Soviet forces were much nearer, and the question of who controlled the area was much more vital to the Soviet leaders.³⁴

The second assumption made by freedom-of-action advocates is crucial. If nuclear superiority makes a great deal of difference in a

³³*Scope, Magnitude, and Implications of the United States Anti-ballistic Missile Program*, 90th Congress, 1st Session, Joint Committee on Atomic Energy (Washington: Government Printing Office, 1967), p. 73.

³⁴*Strategic and Foreign Policy Implications . . . , II* (Jerome Wiesner testifying), p. 499.

crisis, *the United States will use tremendous power responsibly*. This was easily assumed in the self-confident 1950's and early 1960's. We ought to have heeded Reinhold Niebuhr's prophetic warning:

Great disproportions of power . . . tempt the strong to wield their power without too much consideration of the interests and views of those upon whom it impinges. American power in the present world situation is inordinately great.³⁵

Contrast this attitude with Leon Johnson's statement that letting the Soviets have strategic parity is *disadvantageous*, because "it makes it essential for the United States to consider Soviet vital interests more carefully and avoid transgressing them."³⁶ It is a strange sort of value judgment that denies the Communist nations a right to any vital interests at all. Fulbright had a phrase for it--"the arrogance of power."

It is this arrogance which seems to underlie the present longing for the "Cuba power environment." Ironically, the missile crisis was one of the clearest examples of American irresponsibility. Vital U. S. interests were not at stake; the Soviet act was substantially parallel to an earlier American deployment of missiles in Turkey.³⁷ The Kennedy

³⁵ Reinhold Niebuhr, *The Irony of American History* (New York: Charles Scribner's Sons, 1952), pp. 134-135.

³⁶ Leon Johnson, "For: Leon Johnson," in *ABM: Yes or No?* (Santa Barbara: Center for the Study of Democratic Institutions, 1969), p. 24.

³⁷ Jeremy J. Stone, *Strategic Persuasion* (New York: Columbia University Press, 1967), p. 8.

administration scorned U Thant's suggestion that we might trade a withdrawal of Turkish IRBM's for a withdrawal of Cuban IRBM's. Yet the administration had already ordered the Turkish missiles withdrawn! (They were finally removed in 1964.)³⁸ Perhaps if we hadn't been so powerful, we would have pursued a more reasonable course.

The same argument applies to American relations with China. Our China policy has been notoriously rigid and uncreative.

U. S. policy toward communist China--the foundation upon which this new arms race is being constructed--commands the support of only a minority of the relevant intellectual community, the bulk of which seems to believe that a non-militant and even a non-military posture toward China could still be best for the United States in the long run.³⁹

If the ABM is believed to be effective, America will be tempted to continue her cavalier disregard of Chinese interests and sensitivities. We will be more belligerent and the Chinese more fearful and hostile.⁴⁰

ABM proponents argue that Safeguard will give us more freedom of action in a crisis with Russia or China. They also maintain it will give us more latitude to intervene in the newly developing nations.⁴¹ After Santo Domingo and Vietnam, it seems odd to call this an advantage. I realize there are complicated technical and ethical judgments

³⁸Ralph E. Lapp, *The Weapons Culture* (New York: Norton, 1968), pp. 66-69.

³⁹Philip Green, *Deadly Logic* (New York: Schocken, 1966), p. iii.

⁴⁰Compare Yuan-i Wu, *et al.*, *Communist China and Arms Control* (Palo Alto: Hoover Institution, 1968), p. 104.

⁴¹Johnson, *op. cit.*, p. 25.

involved, but to explicate them would take us far afield. In any case, the moral and practical arguments against military intervention are quite well known.

Deterrence has been discussed both as a means of preventing surprise attack and as a method of increasing America's freedom of action in international affairs. Looking back, the argument that the Soviets will soon have a real first strike capability seems as convincing as prophecies that California will soon slide into the ocean. It seems so far-fetched, in fact, that the real concern of the Pentagon may not be with the threat of a first strike, but with international influence under crisis conditions. Safeguard may be seen as a step toward regaining the power environment of the early 1960's. The quest for such strategic preponderance raises fundamental moral issues, both in terms of good and evil consequences, and also in terms of the ancient principle that no moral agent should be given more power than he is likely to use responsibly. I agree with Niebuhr that America already has too much influence over the destiny of mankind. To ask for even more would epitomize the sort of greed which was condemned in the closing pages of Chapter II.

CHAPTER IV

IF DETERRENCE FAILS

Chapter III discussed one of the two major arguments in favor of missile defense, its usefulness in defending our deterrent. Attention must be shifted to the role of Safeguard in protecting people and property in the event of an actual attack. No space need be devoted to this protection provided by Safeguard from a massive Soviet assault. Even the Joint Chiefs of Staff no longer contend that Safeguard would have a significant effect in such an eventuality.¹ A great many people do believe, however, that Safeguard would be useful against China, and against a small, unauthorized attack from any nuclear power, provided we expand it to the full deployment level embodied in Phase II. Deciding whether Safeguard's value as a population and property defense justifies its cost² is a matter of both moral and technical judgment. In relation to China, technical arguments seem to show conclusively that Safeguard

¹*Strategic and Foreign Policy Implications of ABM Systems* (Donald Brennan testifying), Subcommittee of Senate Foreign Relations Committee, 91st Congress, 1st Session (Washington: Government Printing Office, 1969), I, 371. Cf. pp. 32 and 288.

²By far the largest portion of the Safeguard system's cost would be spent on population defense, rather than on protecting our deterrent. See Steven Weinberg, "What Does Safeguard Safeguard?" in Abram Chayes and Jerome Wiesner (eds.) *ABM: An Evaluation of the Decision to Deploy an Antiballistic Missile System* (New York: Signet, 1969), p. 97.

has little or no value. Safeguard would apparently be apparently be useful against a small-scale unauthorized attack; *how* useful is a matter of both technical and ethical evaluation.

I. CAN SAFEGUARD PROTECT US AGAINST CHINA?

It has been noted that a deliberate (and suicidal) Chinese attack is a remote possibility, and would indeed amount to an act of outright madness. Since madness is not impossible, and since Chinese missiles might kill ten to twenty million human beings,³ missile defense might be a worthwhile insurance policy. This was the major rationale for the Johnson administration's Sentinel system, which would supposedly limit damage to one million fatalities or less, and with "modest additional outlays could probably limit the Chinese damage potential to low levels well beyond 1985."⁴ There are literally dozens of arguments against such a position, and the most important of these may be summarized in a few pages.

Reliability. The arguments about whether Safeguard can be expected to perform as advertised are intricate, technical and confusing.

³Clark M. Clifford, *The 1970 Defense Budget and Defense Program for Fiscal Years 1970-74* (Washington: Government Printing Office, 1969), p. 54.

⁴Robert S. McNamara, "McNamara on BMD," *Survival*, IX (April, 1967), 114.

Both sides have been guilty of card-stacking and exaggeration, and each has accused the other of grossly misconstruing important technical information. One should not blindly accept either position, but it does seem appropriate to heavily discount the assurances of the Johnson and Nixon administrations. These assurances are contradicted by many eminent scientists, and these scientists frequently seem far more cogent than the confused and sometimes inconsistent replies by the Department of Defense.

According to many scientists, Safeguard will be unreliable primarily because of its incredible complexity.

It can be said without danger of contradiction that the ABM system represents the most sophisticated and intricate system that man has attempted to build.

It is my understanding that the Defense Department is planning to go into production with this system before the components have ever been assembled. I regard this as a very dangerous thing to do even with a much smaller system because the need for retrofitting, rebuilding, retooling, et cetera, is very great even on much more modest equipment. This is why in so much military equipment we do get into trouble, and to follow that procedure for something like Safeguard, it seems to me, borders on being almost irresponsible.⁵

⁵*Strategic and Foreign Policy Implications . . .*, (Jerome Wiesner testifying), II, p. 493.

The requirements on individual components of an ABM system are roughly one hundred times the reliability of components used on the Minuteman guidance and control system as recently as 1966.⁶

If past efforts to create systems of extraordinary complexity had proven successful, these criticisms might be less significant. But the reliability record of "high risk" systems comes close to being comical. Of eleven such systems built between 1960 and 1967, only two performed as planned. "Six rose to only 25 per cent of planned performance."⁷ (This was actually worse than the record during the 1950's.) Safeguard "has all the characteristics that made these systems vulnerable to performance failures."⁸

One of the most critical sources of potential failure is the data processing system, perhaps the most intricate ever to be envisioned. According to Senator Gore, some computer programmers maintain that the Safeguard computer will not be able to function. On hearing this argument, Melvin Laird promised to supply information for the record "in which that particular statement is disputed."⁹ This information consisted of citing two precedents which allegedly showed that ABM

⁶Leonard S. Redberg, "ABM Reliability," in Chayes and Wiesner, *op. cit.*, p. 110.

⁷*Ibid.*, p. 15

⁸*Ibid.*

⁹*Intelligence and the ABM*, Senate Committee on Foreign Relations, 91st Congress, 1st Session (Washington: Government Printing Office, 1969), p. 22.

computers should have no serious difficulties.

The data processing function is an extremely important part of the ABM system, and we know that the job of developing the necessary capability will be a difficult one. However, the task is comparable to that done by the electronic switching system (ESS) developed and programmed by the Bell Telephone Laboratories for the nationwide telephone system.

In addition to the electronic switching system, we have had a great deal of experience with the same kind of data processing problems in our air defense programs during the last 10-15 years.¹⁰

ESS and air defense computers are most fascinating as precedents for Safeguard, particularly when cited by a Safeguard proponent. J.C.R. Licklider, professor of electrical engineering at Massachusetts Institute of Technology, comments on the ESS system:

The telephone company developed its Electronic Switching System carefully and deliberately. The curve of "percent programming completed" against time rose at about half the projected rate, then bent over and approached one hundred percent asymptotically, adding another bit of confirmation to the rule that such systems turn out to require at least twice as long for their development and deployment as their planners think they will.¹¹

The most sophisticated air defense computer was SAGE, a system which was not a terribly great advance over the previously-built Cape Cod system. The Cape Cod program went well, but SAGE was a disaster.

¹⁰*Ibid.*, p. 23.

¹¹J. C. R. Licklider, "Underestimates and Overexpectations," in Chayes and Wiesner, *op. cit.*, p. 124.

"The number of man-years of programming required was underestimated by six thousand at a time when there were only about a thousand programmers in the world."¹²

Secretary Laird's "precedents" are precedents for failure, particularly when the entire Safeguard system can *never* be subjected to a realistic test.¹³ Problems of mechanical reliability alone seriously undercut the case for BMD.

Chinese Countermeasures. Another criticism by the scientific community is that Washington has underestimated the effectiveness of the countermeasures which the Chinese are likely to develop. Admittedly, the United States had to spend a great deal of money to develop effective penetration aids for its ICBM's. Even so, the Chinese have the advantage of drawing on our own experience, through information freely available in the unclassified literature (the Chinese are known to read Western technical journals with great care).¹⁴

One of the most persuasive discussions of penetration tactics is an article in *Scientific American* by Richard L. Garwin and Hans A. Bethe. After reading their critique on Sentinel, Congressman William Bates requested a reply from General Starbird who manages the Sentinel system. Three of the points at issue are especially significant.

¹²*Ibid.*, p. 121.

¹³Cf. *Strategic and Foreign Policy Implications . . .*, III (Herbert York testifying), p. 668.

¹⁴Yuan-li Wu *et al.*, *Communist China and Arms Control* (Palo Alto: Hoover Institution, 1968) p. 104.

To begin with, there is the probability that an attacker would concentrate his fire on a few major cities "so that most of the interceptors, all bought and paid for, have nothing to shoot at."¹⁵ If a Chinese force of seventy-five missiles were concentrated entirely in the New York/New England area the supply of ABM's would quickly be exhausted, and at least five to fifteen hydrogen bombs would find their targets (the data which lead to these conclusions are explained in the Appendix). Since the ten largest urban areas in this region will have a combined population of over twenty million by the late 1970's, a concentrated attack would be a simple and effective way of nullifying American defenses. It is interesting that General Starbird did not comment on this tactic in his reply to the Garwin and Bethe analysis.

Starbird did comment on the use of decoys and chaff. According to Garwin and Bethe decoys could be fired before the actual attack.¹⁶ "Several thousand such decoys launched by a few large vehicles could readily exhaust a Sentinel-like system. The attack with real warheads would then follow."¹⁷ "Chaff" consists of fine metal wires. The

¹⁵Richard L. Garwin and Hans A. Bethe, "Anti-Ballistic Missile Systems," *Scientific American*, CCXVII (March, 1968), 25.

¹⁶*Ibid.*, p. 26.

¹⁷*Ibid.*

authors estimate that one hundred million such wires would weigh only four hundred forty pounds.

The chaff wires could be dispersed over a large volume of space; the chaff could be so dense and provide such large radar reflection that the re-entry vehicle could not be seen against the background noise.¹⁸

Starbird's reply is that these countermeasures are very difficult to develop. "It has certainly required a very significant effort for us to develop effective penetration aids."¹⁹ Dr. Bethe testified in 1969 before a Congressional subcommittee that he remained unconvinced.²⁰ Dr. Bethe is a world-renowned physicist, who seems to have a fairly neutral attitude toward BMD. He is in favor of eventually using the ABM to defend our deterrent (though he feels the decision to deploy was certainly premature), and he even assumes that Safeguard will function as planned. The fact that he and other eminent scientists²¹ are so concerned about decoys and chaff must be weighed with due seriousness.

A third point in the *Scientific American* analysis involved the problem of blackout. Nuclear explosions in space make it difficult for

¹⁸*Ibid.*, p. 29.

¹⁹*Hearings on Military Posture*, House Committee on Armed Services, 90th Congress, 2nd Session (Washington: Government Printing Office: 1968), p. 9045.

²⁰*Strategic and Foreign Policy Implications . . .*, p. 36.

²¹*Cf. Chayes and Wiesner, op. cit.*, p. 17-24.

a radar to find its target.

Fireballs of very large diameter can be expected when megaton weapons are exploded above 100 kilometers. These could well black out areas of the sky measured in thousands of square kilometers.²²

Although the article placed great emphasis on blackout, Starbird's reply treats it only in passing. He claims that this countermeasure has been "taken into conservative account,"²³ but presents no evidence at all to support his statement. He does offer one attempt at logic. Blackout would be an insignificant problem because "the uncertainties . . . would present an attacker great difficulty in confidently planning an attack."²⁴ The point has no relevance. A thin ABM system is not designed to keep China from "confidently planning an attack." It is designed to minimize damage if the Chinese do attack out of irrational desperation. Creating one more uncertainty would not deter an act of madness.

In his 1969 testimony, Bethe once again emphasized blackout, which he facetiously referred to as his "favorite penetration aid."²⁵ No persuasive analysis of blackout has yet been presented by the Department of Defense.

Circumventing Safeguard. Eminent scientists have raised important

²²Garwin and Bethe, *op. cit.*, p. 30.

²³*Hearings on Military Posture*, p. 9045.

²⁴*Ibid.*

²⁵*Strategic and Foreign Policy Implications . . .*, I, p. 36.

questions about ABM's reliability and its effectiveness against Chinese countermeasures. They have also suggested that ways might be found to partly or entirely circumvent the system. Options include "suitcase bombs," low-flying planes and missiles, and thermo-nuclear torpedoes launched at American ports. Another possibility is called "salvage fusing."

An attacking missile could be fused to explode when a defensive ABM begins to get within striking range or even in the first instant of an interceptor's explosion, to "salvage" its usefulness to the attacker. In the case of the Sprint, this altitude would normally be between five and ten miles. At these heights the effect of explosion of the offensive weapon could be devastating to unprotected objects on the earth below. For instance, a 5-megaton bomb exploding at a height of ten miles would set fire to the clothing of people standing in the open and to wooden structures over a 400-square-mile area. A fire storm is a serious likelihood.²⁶

Such a technique would be an important adjunct to the tactics of concentration, decoys, chaff, and blackout. The most frightening possibility of all, however, involves the use of chemical and biological warfare (CBW). In all probability, such warfare could render the Safeguard system absolutely impotent.

Although Garwin and Bethe mentioned CBW as an option,²⁷ no one seems to have developed the issue in detail. China wants very much to

²⁶Chayes, *et al.*, "An Overview," in Chayes and Wiesner, *op. cit.*, p. 23.

²⁷Garwin and Bethe, *op. cit.*, p. 24.

have a credible deterrent. Her fear of American aggression is real. If she believes Safeguard (*or a greatly-expanded version of Safeguard*) would reduce the credibility of her deterrent, CBW will become an overwhelmingly attractive option. China has apparently begun to develop a chemical/biological capability,²⁸ and such "weapons do not require elaborate or large-scale facilities for their manufacture. The basic raw materials are cheap and can be processed in ordinary or microbiological laboratories."²⁹

There is little possibility of knowing in advance whether a CBW attack or a thermonuclear attack would have a more catastrophic impact. Without question, however, CBW agents rank alongside H bombs as weapons of mass destruction. Eight ounces of botulinus toxin could kill the entire population of the world.³⁰ Aerosol spray from an off-shore fishing trawler could kill millions of people,³¹ and according to the head of the Army Chemical Corps:

A potential enemy could perhaps kill or seriously disable 30 per cent of the American population--about sixty million people--by mounting a biological warfare attack with only ten aircraft.³²

²⁸Yuan-li Wu, *op. cit.*, p. 42.

²⁹Seymour M. Hersh, *Chemical and Biological Warfare* (New York: Bobbs-Merrill, 1968), p. 302.

³⁰*Ibid.*, p. 312.

³¹Carl A. Larson, "Biological Operations," *Ordnance*, LI (January-February, 1967), 360.

³²Hersh, *op. cit.*, p. 68.

These are hardly the kinds of weapons we want to encourage the Chinese to develop, but they would work quite effectively against an ABM. Instead of carrying a single thermonuclear re-entry vehicle, the Chinese rockets could carry hundreds of small chemical and/or biological bomblets, designed to release their contents at lower altitudes. There would be far too many for our ABM's to intercept. The silent killers would drift with the wind over America's greatest population centers.³³

This strategy would not require the development of MIRV's which are "aimed" in the usual sense of the term. These agents can spread over such a wide area as to need very little accuracy. The CBW bomb-lets would simply be scattered in all directions, and would release their contents at pre-determined altitudes. Some would kill hundreds; others would kill tens of thousands. Little technical sophistication would be required.

As an alternative, chemical or biological agents might be smuggled into a country. A very few collaborators could do an incredible amount of damage. "A dot . . . under a stamp may conceal enough (biological) material to start an epidemic."³⁴ Initially, such clandestine capability might be established as a deterrent. In time of crisis, the

³³Cf. Larson, *op. cit.*, p. 360.

³⁴*Ibid.*, p. 359.

Chinese could tell us of the CBW fifth column and perhaps even demonstrate that it existed. This approach would be very dangerous to us, because China might have great difficulties establishing firm control over her CBW collaborators. The most important point for our purposes in this chapter, however, is that such a deterrent could be used irrationally, just as an ICBM deterrent could be. If one is greatly concerned about a Chinese dictator launching a nuclear strike because of grossly irrational thinking, one can find little comfort in antiballistic missilery. A shift to CBW would probably result in similar casualty levels. Even if it could be demonstrated that fewer deaths would result, there are three more important dangers involved which would cancel out any advantage that Safeguard might gain us.

First of all, encouraging Chinese CBW would make chemical and biological disarmament more desperately difficult than it is even today.³⁵ Not only would another major arsenal be added to current stockpiles, but worldwide attention would be focused on the advantages which such agents provide. Other nations might follow the Chinese example.

A second disadvantage would be psychological. CBW agents seem to horrify people even more than nuclear weapons. A China that threatened the world with germs and deadly gases would be seen as a monstrous,

³⁵For an evaluation of the seriousness of this problem, cf. Hersh, *op. cit.*, Chapter 11.

barbaric nation. China's psychological isolation would be deepened.

Finally, CBW might even undercut our deterrent and encourage China to strike first. I do not think she would, even in a crisis. But if a strike were possible by clandestine means, there is some small chance she might go ahead. "Biological operations aiming at mass extermination can still be covert, meaning that the user can conceal . . . his identity even if the operation as such cannot be concealed."³⁶ If such an operation took place during a Soviet-American crisis, how could we know who the culprit was? I must emphasize that I do not expect the Chinese to become viciously aggressive and expansionistic in the next few years.³⁷ But those who are addicted to pro-ABM worst-case scenarios

³⁶Larson, *op. cit.*, p. 360.

³⁷There seems to be a popular misconception that the Chinese are a militant people, bent on imperialism, and naive about the destructive power of nuclear weapons. American Sinologists are in sharp disagreement with this conception. For example, Alice Langley Hsieh, senior staff member of the RAND Corporation, has testified that: "Far from conforming with this public image of warlike bellicosity, China's external military policies in pursuit of her long-term foreign policy objectives--great power status, hegemony in Asia, removal of U. S. power and influence from the Western Pacific--have been characterized by a considerable degree of caution." She also noted that: "Despite charges that the Chinese minimize the destructiveness of nuclear weapons, for well over a decade Chinese military literature has acknowledged the destructiveness of nuclear weapons and recognized the key implications of nuclear weapons for modern military operations and strategic concept." *Scope, Magnitude, and Implications of the United States Antiballistic Missile Program*, 90th Congress, 1st Session, Joint Committee on Atomic Energy (Washington: Government Printing Office, 1968), pp. 76 and 78. Cf. C. P. Fitzgerald, "Foreign Policy: A Revolutionary Hiatus," *Bulletin of the Atomic Scientists*, XXV (February, 1969), 53; A. Doak Barnett, *China After Mao* (Princeton: Princeton University Press, 1967), p. 48; Yuan-li Wu, *op. cit.*, p. 20.

should also consider worst-case arguments against the Safeguard system.

Proponents of Safeguard have overestimated its probable reliability and underestimated the effectiveness of Chinese countermeasures. This is particularly true of CBW countermeasures, and these alone might make Phase II a meaningless waste of money.

II. CAN SAFEGUARD PROTECT US AGAINST UNAUTHORIZED ATTACKS?

"Unauthorized attack" may be defined as an accidental launch or an attack on the initiative of some military official without the explicit command of his government. Since such an assault would probably involve only a few missiles, Safeguard might be an effective defense. Previous points about Safeguard's reliability and possible countermeasures (especially the CBW approach) make the ABM less useful than might be imagined at first glance, but some benefit would remain. This benefit would be further reduced if Safeguard is not to be kept on a continuous alert status. Some feel it should only be readied in a crisis situation, since a continuous alert would greatly increase the chance of malfunction, accidental firing, and perhaps even accidental detonation.³⁸ The government has not clarified this issue, perhaps because no decision has been made about which policy would be more appropriate. Highly technical questions are involved, and it is

³⁸Chayes, *op. cit.*, p. 41.

impossible for laymen to reach reliable conclusions from the commonly available literature. If an accidental firing should take place, there are at least two important dangers to be considered. First of all, it has been claimed that the light flash "would . . . cause permanent eye damage to persons as much as hundreds of miles away."³⁹ The Pentagon has denied this allegation. Secondly, there is the risk of plutonium poisoning.

If an ABM accident should take place, the site of greatest probability is the area near the Safeguard system, but a computer running amuck or an unfavorable wind pattern could mean plutonium poisoning for many people hundreds of miles from the missile location.⁴⁰

For the time being, I will tentatively assume that the risk of such accidents occurring is relatively minor. At the same time, it should be stressed that a thorough public discussion of previously classified information on ABM safety is absolutely essential. If the administration refuses to participate in such an open discussion, the public ought to be quite skeptical about official assurances.

It is also important to consider alternative approaches to decreasing the possibility of a successful unauthorized launch. For

³⁹Curtis Callan, *et al.*, *ABM ABC* (Cambridge: Union of Concerned Scientists, 1969), p. 5. (Italics deleted.)

⁴⁰Joel Larus, "Nuclear Accidents and the ABM," *Saturday Review*, LII (May 31, 1969), 10.

instance:

ICBM's could be equipped with a device that would permit them to be disarmed by radio after launching. The Hot Line could even be used to transmit the code required to disarm an accidentally launched missile.⁴¹

Assuming for the moment that no other method of reducing the likelihood of a successful, unauthorized attack is feasible, does Safeguard's form of accident insurance justify Phase II of Nixon's program? I do not know of any writer who would take this position, unless he also believed that Safeguard would protect us against China. Only a person who was unusually fearful of an unauthorized launch, *and* who was not particularly fearful of the ways in which Safeguard may increase the danger and destructiveness of war, would be able to justify the system on these grounds alone.

In the past two chapters, the major arguments for Safeguard have been reviewed, and it seems clear that neither Phase I nor Phase II provides benefits commensurate with its cost. Safeguard should therefore be opposed, but one can draw no conclusions at this point about whether our opposition should be mild, moderate, or militant. It is therefore important to focus on some of the ways in which ABM is not only a bad bargain but positively dangerous. These factors will be considered in Chapters V and VI.

⁴¹Callan, *op. cit.*, p. 12.

CHAPTER V

PROSPECTS FOR ARMS CONTROL AND DISARMAMENT

Since Hiroshima, reflective men have predicted that the age of deterrence would end in disarmament or disaster. Unless the H-bomb is either abolished or stringently controlled, there will be more and more weapons of more and more power in the hands of more and more nations. Such a world of nuclear ubiquity is doomed to finally become a smoldering cinder. The alternative is to move from small steps of arms control to major steps of disarmament.

Small steps there have been. The list includes the Antarctica treaty, the test ban, the agreement banning nuclear devices in outer space, the creation of a Latin American nuclear-free zone, the Non-Proliferation Treaty, and the recent progress toward demilitarizing the sea bed. These are important advances, but they are far overshadowed by the necessities we face. Progress must be more rapid and more substantive. The world is in a race against time and proliferation, and countries that are considering the nuclear option are watching carefully to see if the great powers are serious about arms control. If genuine demonstrations of sincerity are not forthcoming, the Non-Proliferation Treaty will be worthless. Accordingly, items on the agenda during the early 1970's are of crucial importance, particularly the recently-convened SALT negotiations.

SALT (Strategic Arms Limitation Talks) offers us an opportunity

to limit or even curtail both offensive and defensive missiles, at a time when such weapons are rapidly approaching a stage of development at which a truly significant and stabilizing agreement will become much harder to negotiate. American offensive missiles will soon be fitted with MIRV's. Once these are in place, the Soviets cannot be sure how many warheads our missiles actually carry. They will be inclined toward pessimistic estimates, which will goad them into redoubling their efforts to place as many RV's as possible in their own missiles. A treaty which allowed both nations to retain one to two thousand ICBM's would be almost meaningless, because a given country might have five or ten or even fifteen thousand RV's in those two thousand delivery vehicles.

At this writing, the United States has, over strong protests from peace organizations, completed the bulk of her MIRV testing. Henceforth the Soviets will assume we are deploying them to the greatest extent of our ability. Since the Soviets are considerably behind us in MIRV development, the program could have been held in abeyance without endangering our own position. The fact that it was not constitutes an act of grievous myopia. Even so, the administration could still decide not to deploy MIRV and let the Soviets inspect our ICBM's to verify the fact that they each contain only one RV apiece. We would not have to inspect their ICBM's, since they have not yet developed MIRV to the point of sufficient effectiveness. If MIRV were abandoned, there would be some hope for a meaningful ceiling on offensive RV's.

Much the same problem holds true for defensive missiles. Before very long, our ABM program will have reached the point where meaningful limitations are difficult, if not impossible. If a treaty should prevent either side from deploying a significant number of population-protecting ABM's, the arms race would have been partially curtailed. But if large numbers of anti-missiles are allowed, incredible performance breakthroughs are possible from improved radar and computer technology. In a very short time, the capability of a deployed system could be increased from being adequate against "say, three missiles to being adequate against ten."¹ If such a treaty were signed, both nations would feel impelled to continue the present qualitative arms competition.

In reality, it is doubtful if an agreement limiting offensive and defensive weapons *could* be made after the deployment of MIRV and significant population-defending ABM systems (by "significant," I mean something on the order of Safeguard's Phase II). With each party so uncertain about the other's true capabilities, the degree of security for a major arms accord would almost certainly be lacking.

The world is at a watershed. SALT has the potential of damping down the armament spiral, but only if a conclusion is reached before MIRV and ABM have gone too far.

¹Jeremy J. Stone, *Containing the Arms Race* (Cambridge: M.I.T. Press, 1966), p. 55.

SALT will probably take years; if it fails, the quest for disarmament may be set back by more than a decade. The success of these talks ought to be one of America's highest priorities. The following pages will provide additional reasons why the ABM will hinder the current negotiations. Subsequent sections will relate missile defense to the test ban, the struggle to prevent proliferation, and the long-run prospects for disarmament.

I. SAFEGUARD VERSUS SALT

The ABM makes current discussions more difficult by allowing the qualitative arms race to remain unchecked. It also poses at least three other problems.

Wheels within wheels. As might easily be guessed, one of the major obstacles to arms control treaties is the incredible complexity involved in trying to make sure that neither side winds up in an inferior position. If America insists on deploying Phase II (or perhaps even Phase I) of Safeguard, complexity will be piled upon complexity:

We have only just begun to think in concrete terms of the problems of "equalizing" missile capabilities on each side . . . But this balancing of missile capabilities may be child's play compared to the problems of balancing defensive capabilities and their relations to penetration mechanisms. The ability of the defense will depend on its tactics, as well as on its radar, computers, types of interceptors, "hardness," complementary civil defense capabilities, and so on. The most detailed inspection and the most complicated negotiations would be necessary.²

²*Ibid.*, p. 57.

Images of hostility. By continuing to focus the world's attention on the paraphernalia of deterrence, missile defense contributes its share to East-West tensions. The administration says that Safeguard is perfectly benign, since it is so obviously defensive in nature. Psychologically, this is rather naive. "Explosives, missiles, and elaborate communication and detection systems are threatening, even if stated to be defensive, because they evoke images of hostility and are never clearly only defensive."³

Action and over-reaction. Safeguard will also undermine SALT by increasing the overall momentum of the arms race. This momentum creates a psychological climate which is hardly conducive to international cooperation. It also complicates the task of the negotiator. The more rapidly the strategic environment is changing, the more difficult it will be to stabilize it at any given point. Further, it was noted earlier that the greater the number of weapons that the two nations have already built when a treaty is ratified, the less meaningful the treaty tends to become. For all of these reasons, arms races and arms limitations are usually incompatible.

To understand how Safeguard will increase the pace of weapons deployment, it is important to consider the dynamics of military

³ John R. Raser, "Models and Missiles: Simulation Research and ABM Defense," in Davis B. Bobrow (ed.) *Weapons System Decisions* (New York: Praeger, 1969, p. 136.

competition.⁴ The arms race is spurred ahead by worst-case reasoning and by vested interests in military production (the latter will be discussed in Chapter VI). As has already been demonstrated, each side projects what is likely to be the strongest military force the other side can muster a few years hence. Since a lot can happen in that length of time, the projection tends to be extremely pessimistic. Then each nation adds plenty of margin for error, just to be safe. As long as both parties rely on worst-case forecasting, there is no possibility of a stable situation. Action leads to over-reaction, *ad infinitum*.

The 1960's have provided us with some classic examples of action and over-reaction. In response to the nonexistent "missile gap," America built so many ICBM's that McNamara admitted our response had been excessive.⁵ In the mid-sixties, the mistake was repeated due to fear of an anti-missile gap. After the Soviets began to deploy an ABM around Moscow, the general feeling was that we had to "plan our forces on the assumption that they will have deployed some sort of an ABM

⁴For more elaborate discussions see George W. Rathjens, "The Dynamics of the Arms Race," *Scientific American*, CCXX (April, 1969), 15-25, and also Johan J. Holst, "Missile Defense: The Soviet Union and the Arms Race," in Johan J. Holst and William Schneider, Jr. (eds.) *Why ABM?* (New York: Pergamon, 1969), pp. 145-186.

⁵*Scope, Magnitude, and Implications of the United States Anti-Ballistic Missile Program*, 90th Congress, 2nd Session, Joint Committee on Atomic Energy (Washington, Government Printing Office, 1968), p. 107.

around their major cities by the early 1970's."⁶ This fear provided the primary rationale for our two MIRV programs, Poseidon and Minuteman III.⁷ In order to counter seventy ABM's, America is about to add approximately five thousand RV's to our forces. Of course, there *might* have been more than seventy, but once our response is under way it seems to be as unalterable as a Papal decree. It was argued in Chapter III that building Safeguard to compensate for an "SS-9 gap" constitutes our latest over-reaction.

The Soviets probably operate on the same principle, although sometimes they have shown considerable restraint. (As was noted in Chapter I, they allowed us to build up a considerable lead in ICBM's during the early 1960's.) Their Tallin air defense system is evidently a delayed response to America's B-70 bomber. We decided not to build the B-70, but once a major system is authorized in the Soviet Union it becomes as difficult to cancel as it would be in this country. The Soviet SS-9 buildup may very well have also been a defensive over-reaction. Secretary Laird has stated categorically that it is not, and that he can think of no legitimate use for this huge rocket except as a threat to Titan and Minuteman. It is therefore perceived as an aggressive move,

⁶*Hearings on Military Posture* (Robert S. McNamara testifying), 90th Congress, 2nd Session, House Committee on Armed Services (Washington: Government Printing Office, 1968), p. 8506.

⁷*Scope, Magnitude, and Implications . . .* (McNamara), p. 110.

rather than an attempt to preserve the Soviet deterrent from an American first strike force. Perhaps Mr. Laird is correct, but his dogmatic certainty reveals an almost unbelievable inability to empathize.⁸ From their point of view, the SS-9 may be entirely defensive. The buildup began at about the same time that McNamara announced the approval of Sentinel. A great many American commentators assumed that Sentinel was only the first step toward a really massive ABM. The Soviets must have feared that they were right, and one of the most appropriate responses to a major ABM system is to deploy large numbers of very powerful ICBM's. These are quite useful if the salvage-fusing technique described in the last chapter is utilized. Salvage-fusing involves explosions at very high altitudes, and this places a premium upon large-yield warheads.⁹ Alternatively, huge rockets can carry many MIRV's, which are highly effective in penetrating missile defenses (hence our MIRV program in response to the Soviet ABM). There is an excellent chance, then, that the current Soviet SS-9 construction is a response to Sentinel/Safeguard.

The conclusion to be drawn from the last decade of arms-racing is that *a weapon will be built if it can be justified on the basis of worst-case reasoning*. Safeguard quickens the arms race because it worsens the worst cases that Soviet planners are now envisioning.

⁸ Especially in *Intelligence and the ABM*, 91st Congress, 1st Session, Senate Committee on Foreign Relations (Washington: Government Printing Office, 1969), pp. 46 ff.

⁹ Abram Chayes and Jerome Wiesner (eds.), *ABM: An Evaluation of the Decision to Deploy an Antiballistic Missile System* (New York: Signet, 1969), pp. 274-275.

The Nixon administration has said repeatedly that there is no sense in which Phase I of Safeguard could be considered provocative. This is naive. First of all, Safeguard might be useful if America struck first with some missiles and withheld others, in order to threaten the remaining Soviet cities. Safeguard would in this context be defending a blackmail force, not a peace-keeping deterrent. Secondly, Phase I is often regarded as the opening wedge for something even more extensive than Phase II, and the Soviets must take account of this possibility.

If they see us . . . saying that we are only putting it in at two bases but are buying sites for twelve and building a big production line, they will have to assume the worst, too; namely, that either we have made a secret decision to build a lot more or that even though we have not made the decision . . . we have that choice in the years ahead. And since it will take them X years to react, they had better start reacting now.

There will be people in their defense establishment who will say, "look at those Sprints." They will say:

"Now, 150 Sprints does not mean anything but they could deploy 15,000 . . ., which they can manufacture in one year if they want to because the United States has tremendous production capacity . . . Therefore, we had better build an ABM and, therefore, we had better buy another thousand SS-9's and, therefore, we better do something else."¹⁰

Phase II, of course, would be even more provocative than Phase I.

¹⁰ *Strategic and Foreign Policy Implications of ABM Systems*, (Jerome Wiesner testifying), 91st Congress, 1st Session, Subcommittee of Senate Committee on Foreign Relations (Washington: Government Printing Office, 1969), p. 496.

Secretary Laird has admitted that Sentinel would have seemed threatening, but contends that the full Safeguard network would not be.¹¹ Yet to the Soviets the latter must seem like a carbon copy of the former.¹² It has been estimated that for only two and a half billion dollars Safeguard could be made as effective against the Russians as Sentinel was.¹³ Soviet worst-casers must assume that the money will be spent, especially when the administration admits that Safeguard will be expanded as the Chinese threat materializes.¹⁴

It is true that a thin ABM would not be useful against a heavy Soviet strike, assuming the Soviets attacked first. The situation would be entirely different if an American first strike had already reduced the Russian forces to a small fraction of their original capability. The Department of Defense denies that our country is on the verge of a first strike capacity, but the Soviets have grounds for being uneasy. The Pentagon is now concerned because SS-9 missiles *may* have

¹¹*Ibid.*, p. 169.

¹²Ralph E. Lapp, "The Vicious Acronyms," *New Republic*, CLX (June 21, 1969), 17.

¹³Steve Weinberg, "What Does Safeguard Safeguard?" in Chayes and Wiesner, *op. cit.*, p. 100.

¹⁴How much expansion will be involved has never been clear.

sufficient numbers and effectiveness to endanger our Minuteman silos. By adding five thousand RV's to our own inventory, American MIRV's will certainly give us enough warheads to do the same thing to Russia. If the Kremlin believes that these will have sufficient accuracy to destroy their hardened missile sites, they must see an American first strike as a real possibility. The administration could have spared them this anxiety by building MIRV's with just enough accuracy to destroy cities. Supposedly Poseidon and Minuteman III were designed to penetrate the Soviet ABM system in a retaliatory strike. It would therefore seem reasonable to have developed MIRV until it had enough accuracy for counter-city warfare, and then to have stopped testing. Our policy was quite different, with the Defense Department openly emphasizing its desire for pinpoint accuracy. A military trade journal reported in early 1968 that

The new generation of missiles is more accurate than its predecessors. This assurance was given by the Defense Department recently in the announcement that multiple warheads are being developed which will be "far more accurate" than any now in our nuclear arsenal.

.....

They will be far better suited for destruction of hardened enemy missile sites than any existing missile warheads."¹⁵

¹⁵"Defense Highlights," *Ordnance*, LII (March-April, 1968), 454.

Several commentators have expressed their concern about this provocative policy,¹⁶ but the Nixon administration has continued in the path of its predecessor. According to Jeremy Stone:

In his testimony before the Senate Armed Services Committee in which he shook the Soviet rockets at us, Mr. Laird asked for additional money for the Poseidon program for the following purpose, and I am quoting from his testimony: "This is an important program since it promises to improve significantly the accuracy of the Poseidon missile, thus enhancing its effectiveness against hard targets." To the extent that goal is achieved, the United States will possess, just with Poseidon alone, anywhere from 4,000 to 6,000 hard-target killers.¹⁷

It is interesting to note that Secretary Laird was arguing openly for an American first strike capability a few years ago.¹⁸ Whether he gets it or not, the Soviets must assume that this is our goal.

Summary. Handled properly, the Strategic Arms Limitation Talks could halt or even reverse the armament spiral. Handled carelessly, the talks will be a farce. So far, carelessness has been the rule. America is rushing forward with Safeguard and MIRV, in full knowledge that they will complicate the treaty-making process, contribute to East-West tensions, and quicken the terrible rhythm of action and over-reaction.

¹⁶*Strategic and Foreign Policy Implications . . .* (Jack P. Ruina and Herbert York testifying), III, 652 and 674; Marshall Shulman, "The Effect of ABM on U. S.-Soviet Relations," in Chayes and Wiesner, *op. cit.*, p. 16.

¹⁷Jeremy Stone, "The Power of the Pentagon," *Progressive*, XXXIII (June, 1969), 38.

¹⁸I. F. Stone, "Well, If It Ain't Little Old Lyndon B. Nixon," *I. F. Stone's Weekly*, XVII (April 7, 1969), 3.

Despite administration disclaimers, Safeguard seems certain to force a Soviet response, especially in combination with our super-accurate MIRV's. Although it is quite impossible to predict the outcome, SALT does not seem likely to succeed. If it fails, a tragedy of historic magnitude will have occurred, and one of the prime components in that tragedy will have been the anti-ballistic missile.

II. THE TEST BAN

BMD has implications for arms control that go even beyond its impact on offensive and defensive missile limitations. It also threatens the test ban, non-proliferation, and long-range prospects for disarmament. This section will focus upon the first of these issues.

The partial test ban. The prohibition of nuclear testing in the air, the water, and outer space was rightly interpreted as a major step toward peace. The 1963 accord has encouraged other agreements and contributed to a moderate reduction of Soviet-American antipathy. It is acting as a mild restraint on proliferation, and in the long run is greatly reducing the level of atomic fallout. For these and other reasons, it would be most surprising if the U.S. or the U.S.S.R. were to denounce the Test Ban Treaty in the near future.¹⁹ Commitment to

¹⁹Walter C. Clemens, Jr., "The Nuclear Test Ban and Sino-Soviet Relations," in Morton M. Halperin (ed.) *Sino-Soviet Relations and Arms Control* (Cambridge: M. I. T. Press, 1967), p. 166.

missile defense, however, may place the treaty in jeopardy. There would be little justification, even from a military standpoint, in abrogating the agreement in order to improve a "light" ABM such as Safeguard.²⁰ But John Foster, Director of Defense Research and Engineering, has testified that "it would be very useful to have an extensive atmospheric test series" if we decided to build an anti-Soviet defense.²¹ Even a small anti-missile network, however, reduces the possibility that underground testing might be prohibited.

The complete test ban. A halt to underground testing would be one of the more auspicious events of the nuclear age. The arms race would be significantly slowed, particularly in the areas of yield/weight ratios and ABM warhead technology. Long-run savings might amount to many billions of dollars, and the fear of a destabilizing technological breakthrough would be alleviated. Perhaps most crucial of all, another obstacle would be created to the spread of nuclear weapons.²²

²⁰ *DOD Appropriations for 1968*, 89th Congress, 1st Session, Subcommittee of House Appropriations Committee (Washington: Government Printing Office, 1967), III, 57.

²¹ *Ibid.*

²² Leonard Beaton, *Must the Bomb Spread?* (Baltimore: Penguin, 1967), p. 103.

Verification, as usual, is the major point of dispute,²³ but Evan Luard maintains that "probably only those who opposed the Test-ban Treaty itself would remain opposed today."²⁴ Certainly an experimental suspension would be a logical next step. Unfortunately, Secretary Laird has made it clear that commitment to Safeguard automatically reduces our commitment to an underground test ban:

Dr. Foster: Senator Pell, . . . to obtain warheads that are specified for the (ABM) missile will require a continuation of the current underground program.

Senator Pell: Will this not mean then that if we move ahead with the program as proposed, we will have to give up hope of a complete test ban treaty?

Secretary Laird: No, I do not think so, Senator Pell. It depends on what time period you are talking about.

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Dr. Foster: I believe that it will require until 1973, when the system first reaches the phases of deployment, before the warhead program will have reached a satisfactory state.

Senator Pell: Right. If that is the case, and the Soviets go along with the idea, . . . we will be unable to accept our own past proposals.

Secretary Laird: I . . . wish I had the degree of optimism that you possess as far as that treaty is concerned.²⁵

²³Homer A. Jack, "ENDC at the General Assembly," *Bulletin of the Atomic Scientists*, XXIII (February, 1967), 31.

²⁴Luard, *First Steps to Disarmament* (New York: Basic, 1965), p. 252.

²⁵*Strategic and Foreign Policy Implications . . .*, I, 202-203.

Senator Pell had not expressed optimism. He had only indicated that the Soviets might make us eat our words by agreeing to the proposal and then watching us withdraw it. In any case, one can probably bid farewell to hopes that the Nixon administration will work vigorously for a complete test ban. Safeguard deserves the credit.

III. THE SPREAD OF NUCLEAR WEAPONS

As was emphasized in Chapter II, this study is grounded in a concern with the problems of world peace and world poverty. The proliferation of nuclear weapons is crucial in relation to both. The link with peace is obvious, and the link with poverty is almost as apparent. The H-bomb is quite a luxury for a developing nation, and a most seductive luxury indeed. For the sake of power and for the sake of prestige, many small countries have already taken the first steps toward such a capability. Given the power of technological inertia, it will be difficult to avoid moving further and further down the path. The result might be a nuclear club with over thirty members by the year 2000.²⁶

Since it is so important to minimize nuclear proliferation, the impact of missile defense in this area must be considered very carefully. In the first place, one of the major restraints operating today

²⁶Beaton, *op. cit.*, p. 82.

is the genuine hope that America and the Soviet Union will achieve major disarmament agreements in the next decade or two. Such agreements would greatly reduce the significance of nuclear weapons in international affairs, and therefore make them less attractive in terms of both power and prestige. If the rocket-rattling goes on, however, the third world can hardly be expected to maintain its present restraint. For this reason, Article VI of the Non-Proliferation Treaty specifically provides that:

Each of the Parties to this Treaty undertakes to pursue negotiations in good faith of effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international controls.²⁷

If Russia and America disregard Article VI, the treaty will have been abrogated just as decisively as if we had publicly set a match to it.

A more subtle but still significant effect of the ABM is that the Safeguard controversy is calling the world's attention to the significance of strategic weapons and also to the alleged Communist threat. Because of this, and because of the concomitant rise in tension that some observers have noted, the decision to build an anti-missile evidently made the Non-Proliferation Treaty more difficult to negotiate.²⁸

²⁷ Arthur J. Goldberg, "The Attitude of the World Community Toward the ABM," in Chayes and Wiesner, *op. cit.*, p. 209 (italics deleted).

²⁸ Alan Geyer, "Time for Action on the 'Action-Reaction Phenomenon,'" *Christian Century*, LXXV (January 31, 1968), 139.

Other things being equal, the more our ABM policy "advertises" the arms race, the Communist threat, and international conflict, the more likely becomes the spread of nuclear weapons. Of particular significance is the way Safeguard has spotlighted some worst-case analyses of the Chinese threat. As Allen S. Whiting put it, "it is incumbent on us not to proliferate nuclear nightmares in Asia, any more than we would proliferate nuclear weapons."²⁹

On the other hand, Soviet and American missile defenses may be helpful in two related respects. First, they will decrease the significance of small nuclear programs as threatening to the two superpowers. Second, this may lead in turn to an increase in the credibility of the U. S. and Russian commitments to defend allies against such capabilities. China is the obvious current case in point. It seems clear that a Chinese capacity to kill millions of Americans will reduce the credibility of our deterrent in Asia.³⁰ Doubts about the American commitment led France into the nuclear circle; Japan and India may well follow her example. If the ABM is perceived as denying the Chinese a significant damage capability vis-a-vis the United States, our Asian credibility would be enhanced. As arguments in

²⁹ Allen S. Whiting, "Asia and the ABM," in Chayes and Wiesner, *op. cit.*, p. 178.

³⁰ Paul C. Davis, "The Coming Chinese Communist Threat and U. S. Sea-Based ABM Options," *Orbis*, X (Spring, 1967), 49.

in Chapter IV indicated, this is a very big "if."

A counter-argument maintains that to defend against nuclear weapons is to admit that deterrence is far from perfect, and that this would undercut our credibility. "If we show such lack of confidence in the value of our deterrent posture to protect our own skins, how can we expect the deterrent to be credible to India?"³¹

These are psychological arguments; they purport to show how other nations will evaluate our ABM decisions. A good many authors have offered a good many assertions on the subject, but one looks in vain for a scholarly appraisal of the specific reactions of specific governmental units. Till social scientists can provide such analyses, all one really has is informed speculation. My own speculation is that American credibility will be slightly reduced by Safeguard. One can say with greater certainty, however, that the arms race resulting from the combination of ABM and MIRV will make a successful non-proliferation policy almost impossible.

IV. THE HOPE FOR DISARMAMENT

The concern of this section is not with general and complete disarmament, but with the total or near-total abolition of Soviet and

³¹David R. Inglis, "Missile Defense, Nuclear Spread, and Vietnam," in Eugene Rabinowitch and Ruth Adams (eds.) *Debate the Anti-ballistic Missile* (Chicago: *Bulletin of the Atomic Scientists*, 1967), p. 93.

American implements of mass destruction. Such an abolition would, of course, bring us much closer to the ideal of total disarmament.

Much of the relationship between missile defense and radical arms reduction may be inferred from our discussion of the Strategic Arms Limitation Talks. It is almost inconceivable that an agreement to abolish offensive nuclear devices will ever be possible unless the way is prepared by the sort of arms control agreements that might emerge from SALT. Since arms control treaties are important as a prerequisite to genuine disarmament, and since Safeguard helps reduce the odds that current negotiations will succeed, missile defense seems likely to have an adverse effect on long-range hopes for peace. According to the world-perspective on which this study is grounded, this is probably the most important single consequence of Safeguard.

Nevertheless, in the proper context missile defense could be one of the keys to abolishing the Soviet-American balance of terror. In fact, this is one of the main reasons why I feel so strongly that disarmament is preferable to deterrence.

The crucial obstacle to a disarmament agreement seems to be the fear that one nation might hide a few nuclear weapons and use them to dominate the world. To make sure this doesn't happen, one must either make sure that no weapons have been hidden or that hidden weapons would not be decisive in an international conflict. If America concealed two or three ICBM's, we could do great damage to the Soviet Union, but probably could not conquer it without a long struggle. Nevertheless, the Russians may fear that several dozen missiles might be retained,

with overwhelming results. American fears are similar, and there are some indications that these anxieties may be justified. An experiment in the early sixties illustrated the seriousness of the problem:

The exercise . . . was carried out in British fissile material plants with great care and thoroughness, covering past and current productions of both plutonium and uranium. A world-wide control organization with a complement of about 1,500 scientists, and a total with supporting staff of about 10,000, would not be able to guarantee in those countries which have had nuclear weapons programmes that some 10-20 percent of the weapons had not been hidden, the percentage figure perhaps varying somewhat from country to country.³²

It may be that such risks as are involved in disarmament agreements are less significant than the risks of an endless arms race. After all, there have been incredible breakthroughs in inspection capabilities, and more can be expected. Satellite inspection alone can already detect objects as small as a button, and our sensors can discover missile silos even if grass is growing on top of them. "Radio receivers in the U. S. satellites apparently listen in on Soviet conversations."³³ Present and future satellite systems, in combination with our extensive espionage network, can provide a good deal of security from unilateral inspection alone.³⁴ The choice between a balance of terror and a good (but not foolproof) disarmament agreement can only

³²Sir Michael Wright, *Disarm and Verify* (New York: Praeger, 1964), p. 81.

³³Jeremy Stone, "Can the Communists Deceive us?" in Chayes and Wiesner, *op. cit.*, p. 195-197.

³⁴*Ibid.*, pp. 193-198.

be made by a subjective evaluation of risks and utilities. We could argue until Doomsday--literally--about which is least dangerous. But the blunt fact remains that a majority of Americans place their faith in deterrence and will only accept disarmament if it is clearly superior to the old, familiar system of threat and counterthreat. This hesitancy will evidently persist, even though levels of mutual trust may rise significantly. Social scientists have verified the common-sense notion that mistrust between nations tends to perpetuate itself:

. . . perceptions of low hostility are self-liquidating and perceptions of high hostility are self-fulfilling. The former, being associated with weakness and frustration, do not invite reciprocation; the latter, assumed to derive from strength and success, are likely to result in reactions which will increase rather than decrease tensions.³⁵

Levels of trust are not likely to reach the point required for a major disarmament agreement during the foreseeable future. It would therefore be most helpful if a way were found to make disarmament possible at a lower level of trust. ABM might prove to be the solution.

Imagine for the next few paragraphs that the only strategic threat comes from ICBM's and SLBM's. Suppose that under a disarmament

³⁵Ole Holsti, cited by Philip Green, *Deadly Logic* (New York: Schocken, 1966), p. 202. For a more optimistic viewpoint, see Amitai Etzioni, "Kennedy's Russian Experiment," *Psychology Today*, III (December, 1969), 42 ff.

treaty, nations are allowed to retain internationally inspected ABM's.³⁶ (Such weapons may be rendered incapable of offensive use.)³⁷ The Soviet Union would no longer need to fear that America would conceal a few dozen missiles and use them to conquer the world. (By carefully concentrating our fire on a few cities, we might be able to do terrible damage, but we could not overwhelm them militarily.) As time passed, the defense would become more and more sophisticated, till both sides possessed a virtually foolproof capacity for damage denial.

By way of illustration, such an agreement might be implemented in the following six phases:

1. Secret negotiations to determine whether the Soviets were willing to discuss the proposal.
2. A major presidential address explaining the new disarmament strategy, renouncing American production of MIRV, and allowing U. N. inspectors to verify this renunciation.

³⁶ Alternatively, a U. N. peace force might be set up, including anti-missile systems and crews. "Senator Gore . . . urged the Secretary of State to suggest to the Soviets a willingness to discuss the feasibility of an international agency, preferably the U. N., deploying a thin ABM line." Rusk "noted that there were problems of who would pay the cost and under what circumstances firing would take place." Betty Goetz Lall, "Congress Debates the ABM," *Bulletin of the Atomic Scientists*, IX (September, 1967), 31-32.

³⁷ Andrew Hamilton, "Anti-Missile Missile for Export?" *New Republic*, CLVII (December 10, 1966), 16.

3. Cooperative Soviet-American research into the feasibility of the proposal, combined with an intensive campaign to educate the public and encourage full discussion.

4. Pooling of Russian and American ABM and bomber defense research, a freeze on all strategic forces, and the development of a detailed treaty for disarmament.

5. Ratification of the treaty, and *then* the construction of missile defenses.

6. Reduction of offensive strategic weapons by ten per cent every year.

There are rational arguments against this position, which are reinforced by the antipathy which many of us feel toward BMD. Since Safeguard is such a dangerous and ill-conceived program, it is difficult to think of missile defense as being beneficial under *any* circumstances. When Donald Brennan suggested to the Arms Control and Disarmament Agency that such a system might be the key to disarmament, his recommendation "was about as warmly received . . . as a skunk at a lawn party."³⁸ Despite our strong feelings, it is essential to consider *specific* ABM systems in *specific* contexts. Otherwise one falls into the trap of legalism, imagining that certain human actions (whether premarital intercourse or building an anti-missile) are always wrong, regardless of the circumstances.

³⁸ *Strategic and Foreign Policy Implications . . .*, p. 376.

A more rational objection to this proposal is that it would still be a military approach to peacekeeping. The emphasis would be on defending ourselves rather than on threatening to kill a hundred million people, but it would still involve relying on military technology. Perhaps mankind must break completely with the weapons psychology. I do not accept this position, but the most important point to be made is that there is absolutely no chance that America's leaders will accept it in the remotely foreseeable future. An ethical analysis of defense policy must take account of certain unalterable political realities, and this is one of them. I am not denying the great significance of utopian speculation, but only contending that this approach is insufficient.

Another objection is that this proposal would cost a lot of money. This is true. To provide the requisite confidence, a system about twice as extensive as Phase II of Safeguard would probably be necessary. While the ABM was being deployed and offensive rockets were being phased out, the savings would not be impressive. On the other hand, if this approach brought about disarmament twenty to thirty years before any other, the long-term savings would be phenomenal. Economies would also result if Russia and America pooled their defensive research and development efforts; such a step could be taken during the immediate future.

The final argument against an ABM/disarmament agreement is crucial. There are other ways of attacking a nation than with guided missiles (see Figure 2 for a list of all possible threats under the

proposed disarmament plan and the ways that these threats could be countered). Bombers, of course, could be taken out with existing levels of air defense, even if one nation managed to conceal a few of these huge airplanes. "Suitcase bombs" are a possibility, but they are not considered to be important militarily.³⁹ Not much information is available on methods of inspecting ships that might be carrying torpedoes with hydrogen warheads. This remains an area of uncertainty. And once again, chemical and biological warfare presents an important problem.

It may well be impossible to prevent the secret manufacture of CBW agents.⁴⁰ Defense against such weapons may also be impractical. As a result, a retaliatory force of ten to twenty ICBM's might have to be retained for deterring such unconventional threats (see 4 and 5, Figure 2). Such a force would be highly invulnerable unless it were attacked by missiles or bombers, and such an attack could be effectively precluded by missile and bomber defenses.

There still remains one danger. If the United States attacked the Soviet Union with CBW agents, or vice versa, the ten/twenty unit retaliatory force would be meaningless, since in each case the attacking nation would possess an effective defense against such a retaliatory

³⁹*Scope, Magnitude, and Implications . . .*, John S. Foster testifying), p. 40.

⁴⁰Seymour Hersh, *Chemical and Biological Warfare* (New York: Bobbs-Merril, 1968), p. 302.

THREAT	HOW NULLIFIED
Attack on population with small number of ICBM's.	Extensive ABM system
Attack on population with bombers	Present bomber defenses
Attack on population with concealed nuclear weapons ("suitcase bombs")	Not militarily decisive
Attack on population with nuclear torpedoes and similar devices	Minimum deterrent of 10-20 ICBM's
Attack on population with CBW agents	Minimum deterrent of 10-20 ICBM's
Attack on population with CBW; attacker's identity successfully concealed	Could not be nullified, but the same thing could happen without disarmament
Attack on minimum deterrent with CBW	Not effective against hardened missile sites
Attack on minimum deterrent with bombers and/or ICBM's	ABM and air defense

Figure 2
Threats and responses after Soviet-American nuclear disarmament

strike. This creates a very complicated problem, which is considerably mitigated by four factors.

First, airplanes and missiles could not be used to deliver the CBW agents, and other methods are less reliable and generally less effective.

To launch a CBW attack by using agents within the enemy country would be very risky, and an effort large enough to be militarily decisive would involve very grave dangers of premature detection. Even a hideously effective operation might not insure victory, since industry and materiel would remain largely unaffected.

In the third place, the attacked nation could quickly begin building up its own CBW capabilities.⁴¹

Finally, the odds are good that a national government which was sufficiently aggressive, immoral, and foolhardy to attempt such a venture would also have taken risks that might well have led to nuclear war if disarmament had never taken place.

One hopes that better defenses against CBW will be discovered, so that even a small retaliatory force would be unnecessary. If not, ten or twenty missiles would certainly be an improvement over the ten or fifteen thousand warheads the U. S. and the U. S. S. R. may have deployed by 1980. Even if complete nuclear disarmament is ruled out, the ABM makes dramatic cutbacks a politically feasible possibility.

⁴¹*Ibid.*

After many pages, it would seem that an important argument for building the Safeguard ABM has finally been discovered. Such is not the case. I wish to emphasize so strongly that there is no possibility of misinterpretation the fact that Safeguard makes disarmament less probable. The previous pages have argued for an ABM as part of a carefully worked out disarmament treaty, a treaty that would come *before* the ABM and to which the ABM would be tailored. This is quite different from saying America ought to deploy the anti-missile, hoping that it just might fit in with future disarmament proposals. In the first place, no one has demonstrated that Safeguard would be appropriate to this particular mission. Furthermore, disarmament is not likely without years of negotiations, followed by a long period of graduated force reductions. By that time, Safeguard is likely to be incredibly primitive in comparison to available alternatives. Finally, even if Safeguard were appropriate to the task, there are a great many respects in which it leads away from arms reductions unless it is specifically placed in the context of an international disarmament agreement. Hence Dr. Wiesner, Dr. Marshall D. Shulman, and Dr. Wolfgang Panofsky have concluded that whatever the merits of an ABM-based disarmament treaty, this in no way argues for the current Safeguard program.⁴²

⁴²*Strategic and Foreign Policy Implications . . .*, I, 147 and 365; "A Discussion," in *ABM: Yes or No?* (Santa Barbara: Center for the Study of Democratic Institutions, 1969), p. 37.

At least one prominent analyst disagrees--Donald Brennan, former president of the Hudson Institute. Brennan does not believe that a limited ABM will interfere with the SALT talks, and feels that it may be possible to achieve a high degree of "disarmament" by keeping missile forces constant as both nations continually expand their ABM programs. This process need not take place within the context of a formal treaty. Perhaps Dr. Brennan has a degree of vocational bias at this point. The Hudson Institute has received most of its funds from the Army, and Safeguard is a major Army project. This is only speculation, of course, and proving such an allegation would be quite difficult. Dr. Brennan's writings indicate rather clearly, however, that the disagreement with Wiesner and others may be partially rooted in basic differences of opinion about the nature of man. Brennan's analysis implies an unusually sanguine view of human rationality. Since I am more prone to pessimism than Brennan, I assume that the Soviets will interpret Safeguard as potentially threatening, and act accordingly. Brennan believes the opposite will be the case:

Soviet attitudes are themselves already favorable to a defensive posture. In recent years they have been substantially and sharply increasing their offensive forces, but it is still probable that they have more of a doctrinal emphasis on defense as a way of military life than the United States has had in quite a few years. If the United States attitude were to go in the same direction, with both of us coming to place primary emphasis on defense, we might find it very easy to agree to an effective ceiling on offensive forces.⁴³

⁴³Brennan, "For: Donald Brennan," in Center . . . , *op. cit.*, p. 22.

To risk a sharp acceleration in the arms race in the belief that each side will properly read the other's signals and trust them to be sincere is to ignore the well-documented history of action and over-reaction and its basis in worst-case reasoning. Without the most formal and explicit kinds of Soviet-American understanding, one side might misread the situation, decide the other party's ABM was an offensive move, and initiate a weapons buildup of disasterous proportions. The same sort of fallacy shows up when Brennan discusses the American military. He contends that the military would not feel uncomfortable when the time came that both sides had such a large ABM complex that U. S. forces could no longer do unacceptable damage to the Soviet Union. Many high-ranking officers would not insist that we have such a capability, "as long as we are in a relatively favorable defensive position ourselves."⁴⁴ I find it difficult to believe that any significant number of generals and admirals would feel content with a "relatively favorable" position in *any* respect. Otherwise, our policy would not be anchored to the greater than expected threat concept, and Safeguard would never have been authorized in the first place.

Brennan is certainly an optimist about human rationality, and one last quotation ought to cinch the point:

Senator Fulbright: I may say that it looks as if there is a high degree of socialism fostered by the Pentagon around this country. The whole Government is in on this act. There

⁴⁴*Ibid.*, p. 22.

is hardly any private enterprise left, is there, especially in the field of research?

Dr. Brennan: As long as we retain our independence, does it matter?

Senator Fulbright: Well, that is a matter of degree, I suppose.⁴⁵

It is indeed. Brennan's reply is contrary to both common sense and to what social science has discovered about the way people form their opinions.⁴⁶

Donald Brennan and I would disagree on other points besides the rationality of man, but this still seems to be a fundamental issue. If the history of the arms race in general and American Defense policy in particular demonstrates a marked tendency to misjudge signals and to create fearsome threats where none exist, then Safeguard is likely to endanger the Strategic Arms Limitation Talks. Yet if a disarmament agreement were ratified that included ABM as a safety precaution, and if an ABM were begun after offensive missiles were actually being dismantled, then BMD could be highly beneficial. One hopes that this possibility will infuse new life into disarmament negotiations, which many have come to regard as a meaningless charade.

⁴⁵*Strategic and Foreign Policy Implications . . . , I, 376-377.*

⁴⁶Cf. Arthur R. Cohen, *Attitude Change and Social Influence* (New York: Basic Books, 1964), pp. 37-41, 62-80, and 100-120.

CHAPTER VI

THE WEAPONS CULTURE¹

To understand the significance of Safeguard, one must be keenly aware of the impact of militarism on American life. This may at first seem to be an exaggeration. After all, missile defense comprises only a small fraction of the vast complex of defense activities. Would the deployment or non-deployment of an ABM constitute more than a ripple on the surface of the military-industrial establishment? The answer to this question will require the rest of this chapter, and it is important to begin with a preliminary observation. Ethics consists largely in evaluating the consequences of human decisions, and each decision must be evaluated in context with other decisions. Otherwise, one of its most significant consequences might seem superficially to be unimportant. This is true for two reasons.

In the first place, it is possible to lose something very important a little bit at a time. This is the reason that anti-Communists are opposed to what they believe to be piecemeal appeasement, but militarism can also come piecemeal. Once one discovers that something of value is being lost a small slice at a time, a line must be drawn clearly so that the trend can be reversed.

¹Ralph Lapp's phrase. *The Weapons Culture* (New York: Norton, 1968).

In the second place, when one places a decision in context with similar decisions, one may discover that it serves as a *symbolic focal point* for all of them. The Safeguard decision tends to enhance the role of the military. Many other decisions in recent years have done the same thing, and the public is increasingly aware of this fact. Placed in the context of this general trend, the ABM has become a symbol of the power of the weapons complex. As a result, Sentinel and Safeguard have generated more controversy than any other strategic weapon in history, and the importance of ABM as a symbol has been cited by Hubert Humphrey, Edward Kennedy, and even Melvin Laird.²

Because the Pentagon has been gaining power, bit by bit, because the time is long overdue for taking a stand, and because the ABM serves as a focal point for such a stand, the future of BMD is definitely related to the future of the weapons complex. In the next four sections, I will argue that America has indeed become a weapons culture, a culture in which the emphasis on armament distorts national activities in four ways. Distorted policies, distorted fiscal priorities, distorted attitudes, and a distorted power structure are all involved, and all are related to missile defense.

²Hubert Humphrey, "The State of the Question, An Introduction," in *ABM: Yes or No?* (Santa Barbara: Center for the Study of Democratic Institutions, 1969), p. 11; Edward Kennedy, "Introduction" in Abram Chayes and Jerome Wiesner (eds.) *ABM: An Evaluation of the Decision to Deploy an Antiballistic Missile*, (New York: Signet, 1969), p. xviii; Melvin Laird, "What's the Answer to ABM and the War?" *U. S. News and World Report*, XLVI (April 7, 1969), 36.

I. ARMS AND AMERICAN FOREIGN POLICY

This section will be brief, since the previous three chapters have documented well the influence of weaponry on policy-making. America has relied far more heavily on deterrence than seems reasonable, and has assigned an astonishingly low priority to arms control and disarmament. To defend our deterrent (ineffectively) against a threat that will probably not materialize, the administration risks emasculating SALT and setting back the quest for disarmament by at least a decade. Our military prowess has also tempted us into bloody and counter-productive foreign interventions, and into taking an overly-rigid line in international crises. Safeguard is intended to give us greater freedom to deploy troops and to take firm stands. It therefore seems likely to reinforce the policy distortions that have resulted from an overgrown arsenal of destructive capability.

II. THE QUESTION OF PRIORITIES

Before discussing fiscal priorities, a realistic cost estimate for Safeguard is necessary. The official figure of 6.6 billion dollars is not even approximately correct. Such a statistic represents the total Department of Defense investment costs of Phase I and Phase II, assuming sites are not added to protect Alaska and Hawaii. It does

³Kennedy, *op. cit.*, p. xx.

not count the nuclear warheads--1.2 billion dollars extra.³ Nor does it include operation, maintenance, and personnel required to get the system working. Six hundred million dollars would be a bare minimum.⁴ This adds up to 8.4 billion. Moreover, it has become a fundamental axiom that complicated weapons systems cost *at least* twice as much as the original estimate. One study of such systems shows a final cost measuring two to three hundred percent of what was originally forecast.⁵ Another shows a two hundred twenty percent figure, another three to seven hundred percent.⁶ To give Safeguard the benefit of the doubt, the previous cost estimate may be doubled to 16.8 billion. This will get the system built, if luck is with us, but it still has to be operated. This brings the grand total to at least 19.3 billion dollars by 1980.⁷ If, as is quite possible, the ABM costs *four* times as much to produce as was estimated, the figure skyrockets

⁴Based on *Authorization for Military Procurement, Research and Development, Fiscal Year 1970, and Reserve Strength* (David Packard testifying), 91st Congress, 1st Session, Senate Committee on Armed Services (Washington: Government Printing Office), II, 1694.

⁵J.C.R. Licklider, "Underestimates and Overexpectations," in Chayes and Wiesner, *op. cit.*, p. 127.

⁶"ABM Cost," *New Republic*, CLX (May 31, 1969), 10.

⁷Kennedy, *op. cit.*, p. xx. This compares well with the estimate of an independent agency, McGraw-Hill's DMS service for the aerospace industry. DMS places the final cost at eleven billion dollars, *without* the anticipated cost overruns. I. F. Stone, "Uncle Sam's Con Man Budget," *I. F. Stones Weekly*, XVII (May 5, 1969), 4.

to over thirty-six billion dollars (two prominent physicists have recently placed their estimates in the thirty to fifty billion dollar range, assuming that the Pentagon makes the anti-missile live up to its advertised effectiveness).⁸ In addition, by heating up the arms race, Safeguard is likely to accrue indirect costs of even greater magnitude. In sum, one is not discussing an outlay of 6.6 billion dollars.

During the tight-budgeted early 1970's such an expenditure would involve a gross distortion of priorities. Ironically, military priorities will be among those affected. McNamara even predicted that *ABM research and development* would be cut back if a system were actually deployed:

Q. Could the country which builds an ABM now conceivably come up with a technological breakthrough that would significantly improve its effectiveness?

A. I think the reverse is more likely . . . that as you proceed in production, the project becomes so immense that there would be a great tendency . . . to reduce your efforts to advance technology.⁹

⁸*Strategic and Foreign Policy Implications of ABM Systems* (Herbert York and Gordon J. F. McDonald testifying), 91st Congress, 1st Session, Subcommittee of Senate Committee on Foreign Relations (Washington: Government Printing Office, 1969), III, 689-690.

⁹*Scope, Magnitude, and Implications of the United States Anti-ballistic Missile Program* (interview with Robert S. McNamara), 90th Congress, 1st Session, Joint Committee on Atomic Energy (Washington: Government Printing Office, 1968), p. 115 (italics deleted).

Sure enough, the 1970 defense budget cuts spending on ABM research and development, even though this aspect of the missile defense program has received almost no criticism.¹⁰

The most important problem of fiscal priorities, of course, is that of military versus civilian spending. As was already noted, spending on past, present and potential warfare consumes seventy per cent of the federal budget. Furthermore, "what often escapes notice is the massive diversion of brainpower away from the civilian economy."¹¹ For example, a third of the money for research and development goes into national defense.¹² We also frequently forget how much of America's natural resources are absorbed by the armed services.¹³

¹⁰"War Spending--More Cutbacks," *U. S. News and World Report*, XLVI (April 14, 1969), 14.

¹¹Humphrey, *op. cit.*, p. 9. This takes place at the highest levels. Jerome Wiesner has written, "I know from first-hand experience that both President Eisenhower and President Kennedy were never able to devote sufficient attention to domestic issues. They spent most of their time on external matters, while trying to cope with internal pressures on behalf of the arms program." He concludes that "the dollar cost of ABM . . . is trivial compared to these other costs." "A Discussion," in *ABM: Yes or No?*, p. 40.

¹²*Scope, Magnitude and Implications . . .*, (Address by John S. Foster, Jr., Director of Defense Research and Engineering), p. 145. Foster also noted on p. 141 that "if we were to push all of the opportunities which we generate it would require much more than the gross national product of the United States to procure and operate the products which resulted. And we would tie up the entire research and development resources of the United States for five to ten years in getting the systems to work."

¹³E. g., the military controls 32 million acres of U. S. land. Fred J. Cook, *The Warfare State* (New York, Macmillan, 1962), p. 21.

ABM funding has already cut into important domestic programs;¹⁴ the impact on the poverty, pollution, and urban affairs crisis is the most critical item. For a twenty billion dollar ABM, federal grants in aid could be tripled for six years in the areas of urban transportation, maternal and child health, urban planning and open space, waste treatment and pollution control, and the Head Start and Follow Through programs, with a billion dollars left over.¹⁵ Alternatively, spending on hospitals, health, and sanitation could be increased twenty-five percent during the same time period, *at all levels of government*.¹⁶ Bruce M. Russett puts the issue bluntly in an article on BMD:

Machiavelli thought it better for a prince to be feared than loved, but he probably would have qualified his statement with the principle that any good policy can be carried to excess. Considering our current programs of expenditure for the instruments of fear we should perhaps demand that further increments in that direction be especially well justified.¹⁷

¹⁴Editor's note in Benson Adams, "McNamara's ABM Policy, 1961-1967," *Orbis*, XII (Spring, 1968), 200.

¹⁵*The U. S. Book of Facts, Statistics and Information* (New York: Essendess, 1967), p. 410.

¹⁶*Ibid.*, p. 411.

¹⁷Russett, "The Complexities of Ballistic Missile Defense," *Yale Review*, LVI (Spring, 1967), 362.

One may also conclude that *only a person who understands the human implications of poverty, pollution, and urban blight is qualified to pass judgment on Safeguard.*¹⁸

Apparently a good many of Safeguard's supporters could spend more time reflecting on priorities. Almost all their discussions simply omit this vital issue. It is understandable that one does not want to bring up a strong argument for the other side, but the end result is a very unconvincing presentation.

On the other hand, when the priorities problem is considered, the level of analysis tends toward superficiality. Leon Johnson, for example, comes close to being flippant:

. . . an ABM might engage the United States in an all-out arms race with the Soviets, which could be expensive both in dollars and in talent. However, it is a race we should be able to win, and the race may in fact be in progress at the moment.¹⁹

¹⁸Of course, the reverse is also true. Other things being equal, the more balanced one's understanding of human implications of two competing federal programs, the more likely one will be to choose between them with justice. It is therefore most essential for proponents of the poverty program to read and reflect upon some of the articles and books on BMD and national defense. It is also crucial that people in the Department of Defense reflect upon such works as Kenneth B. Clark, *Dark Ghetto* (New York: Harper & Row, 1965); Malcolm X, *The Autobiography of Malcolm X* (New York: Grove, 1964); Eldridge Cleaver, *Soul on Ice* (New York: Dell, 1968); and Robert L. Heilbroner, *The Great Assent* (New York: Harper & Row, 1963). We must conscientiously strive for a balanced understanding of society, though the pressures of time and interest make specialization inevitable.

¹⁹Johnson, "For: Leon Johnson," Center . . . , *op. cit.*, p. 25.

A common technique is the use of irrelevant standards of comparison:

The cost of ABM is not out of line when one considers what this country has spent over the last eighteen years trying to put up some kind of an air defense against Soviet bombers.²⁰

I realize the cost to do this is high--indeed staggering--however, if we can afford to spend twenty-four billion dollars a year in defense of a neighbor, and I mean Vietnam, we can certainly spend as much to insure the life and security of our American society.²¹

We should pull out all the stops on research, development and deployment in a crash program to get adequate systems. With our Gross National Product, it is hard to make the argument that money is the problem.²²

I do not agree . . . that economically the country cannot afford it. That is nonsense . . . to detach fifty billion for ABM could be done . . . even while we're spending great amounts of money for the social and economic reconstruction of the country. It is true that this would require a political mood of urgency the country does not now have.²³

The issue is whether the money *should* be spent militarily, not whether in the past we *have* spent comparable sums on questionable projects, and not whether in some almost completely theoretical sense we

²⁰Donald G. Brennan, "A Discussion," Center, *op. cit.*, p. 25.

²¹*Scope, Magnitude, and Implications* . . . (John O. Pastore speaking), p. 104.

²²Frank E. Armbruster, "The Problem of China," in Johan J. Holst and William Schneider, Jr. (eds.), *Why ABM?* (New York: Pergamon, 1969), p. 233.

²³A. A. Berle, "Discussion," Center . . . , *op. cit.*, p. 36.

can afford to fight both hunger and SS-9's.

Finally, a statement by Secretary Laird reveals a good deal of bewilderment at the fuss over priorities:

Q. We've spent 50 billion dollars on anti-aircraft defenses . . . Why all the opposition now to spending 6 or 7 billion on ABM defenses?

A. It is difficult for me to understand, except that this attitude is connected somehow with the frustrations that people have over the war in Vietnam.²⁴

If ABM proponents seem insensitive to the problem of resource allocation, even the opponents of BMD have usually overlooked a related subject, the impact of Safeguard on priorities in Russia.

Because of its smaller Gross National Product, the U. S. S. R. spends a far higher proportion of its resources on defense than does the U. S. It has recently stepped up its spending on ICBM's, so that now it confronts America as a strategic equal. For reasons explained in the previous chapters, Safeguard will force the Soviets to increase their spending even further.

Some writers are pleased with this prospect. They advocate a kind of economic warfare with the Soviet Union, in which our goal is to force a cutback in consumer spending. This in turn will force the masses to revolt. G. Warren Nutter, who as Assistant Secretary of Defense for International Security Affairs is one of the most powerful men in the Pentagon, subscribes to a starve-'em-out strategy. "As soon

²⁴Laird, *op. cit.*, p. 36.

as they become fat--or rather fatter--they get more belligerent and aggressive."²⁵

An alternative viewpoint is the notion that affluence breeds moderation, and even conservatism. The more the Communists have of the "good life," the more they will become cautious and even cooperative establishmentarians. They will have a greater stake in peace and in a stable world.²⁶ This is the reason that McNamara has advocated a loan to the Fiat Corporation for expansion of the Soviet auto industry. "This would be like putting them on dope. Once they get an automobile industry, they will never get off it. And that simply means they divert resources away from defense."²⁷

It would be naive to suggest that either theory can be universally applied. In the present context, however, the broad historical trend in the U.S.S.R. seems to be toward both great affluence and greater moderation. We are therefore called upon to make a value-judgment between a hard-line approach (economic warfare) and a more cooperative strategy. It seems reasonable that when there is no

²⁵"Nuttering," *The New Republic*, CLX (March 29, 1969), 8. A similar sort of reasoning is found in an exchange between Senator Henry M. Jackson and Thomas Wolfe in *Scope, Magnitude, and Implications . . .*, p. 93. According to I.F. Stone, the argument that we should waste money so that the Soviets will have to waste money is used quite frequently. I.F. Stone, "Nixon and the Arms Race: The Bomber Boondoggle," *New York Review of Books*, XI (January 2, 1969), 9-10.

²⁶Bennett, *op. cit.*, p. 44.

²⁷*Scope, Magnitude, and Implications . . .*, p. 117.

compelling reason to be "tough," one should opt for humanitarian policies. The problem of military versus civilian priorities, then, must be considered from both the Soviet and the American perspectives. In each case, the cost will be high, especially if one includes the indirect expense of an accelerating arms race. Furthermore, stopping Safeguard would be a symbolically significant step toward a more fitting allocation of national wealth; if Safeguard can be cut back, so can other military programs.²⁸

III. ARMS AND ATTITUDES

To live in a weapons culture inevitably affects one's attitudes toward potential adversaries. Unfortunately to qualify and quantify the causal relationships involved is impossible. It is true that arms technology plays a prominent role in American life, and it is true that a lot of our citizens hate the Communists. Obviously these two facts tend to reinforce each other, but beyond that it is difficult to do more than make an educated guess. Because of the subjectivity involved, and because the ideas in this section may be summarized quite

²⁸In addition, opposition to military spending on Safeguard may lead to cutbacks in other weapons programs. The desire to mollify anti-ABM and anti-Vietnam forces has certainly contributed to the recent defense budget reductions. "When it became clear that Congress would not automatically buy anything put on the counter, a number of things were suddenly no longer for sale." Philip Hart, "The Last of the Big Spenders?" *The Center Magazine*, III, (January, 1970), 26.

briefly, some may regard this as an unimportant point. Yet the problem of attitudes is basic to our present world predicament. The closing pages of Chapter II stressed this fact in describing the current international situation. It was noted that human relations in general and international relations in particular are characterized by estrangement. Some empathy with our allies may be noted, but other countries are regarded with indifference or with fear and hostility. This is hardly conducive to a realistic understanding of the Communist world. It leads instead to a "fight or flight" orientation when a crisis develops and to a philosophy of fortress-building when the crisis is past. Conflict-oriented attitudes lie at the very center of the dilemmas we are facing.

Nuclear weapons reinforce these attitudes. "Once a nation pledges its safety to an absolute weapon, it becomes emotionally essential to believe in an absolute enemy."²⁹ There is no need for extravagant statements about how the "most pervasive reality in any man's life" will soon be "the poised missile, the humming data processor connected with it."³⁰ John Bennett's more sober evaluation is unsettling

²⁹P. M. S. Blacket, quoted by John Bennett, *Foreign Policy in Christian Perspective* (New York: Charles Scribner's Sons, 1966), p. 102.

³⁰Erich Fromm, "Explorations into the Unilateral Disarmament Position," in John Bennett (ed.), *Nuclear Weapons and the Conflict of Conscience* (New York: Charles Scribner's Sons, 1962), pp. 129-130.

enough:

I am not dogmatic about the precise moral effect of this situation. There are so many ways in which we disguise the full meaning of what we prepare to do from ourselves that there may be hidden effects on our deeper natures. Is there not a great unexplored danger to our moral sensitivities, to our habits of feeling about the meaning of life if generations are brought up with this idea that their nation is poised for a twenty-minute strike against the people of another country?

Also . . . there may be an attrition of one of the natural sources of security for humanity. Surely the moral and human inhibition against being wholesale destroyers is one protection against wanton injury and violent death.³¹

There was prophesy in these words, written a few years before violence per se became a major national issue.

The ABM in particular is important in several respects. First of all, it represents a continuing reliance on the balance of terror, when the pressing need is to break the cycle of hostility and mistrust. Opposition to ABM provides an opportunity to call the current orientation into question.

In the second place, an ABM-related intensification of the Soviet-American arms competition might cause us to "think more of war . . . hate the potential enemy and thereby make war more likely."³²

³¹ John Bennett, "Moral Urgencies in the Nuclear Context," *Ibid.*, p. 109.

³² Richard L. Garwin and Hans A. Bethe, "Anti-Ballistic-Missile Systems," *Scientific American*, CCXVII (March, 1968), 31.

As is typical, Safeguard was justified by exaggerating the Communist threat. Secretary Laird's horror-tale testimony before a nationwide television audience was particularly objectionable. The higher the level of threat, the more money the Pentagon will receive, and the more the American public will fear and distrust the Soviet Union. One final factor is well worth pondering in this regard. Those who do not share in the current obsession with preparedness feel increasingly alienated from those who do. This is particularly true of the young.³³ Our society is becoming more and more polarized, and the inane justifications for Safeguard have made young liberals and radicals more prone than ever to write off intergenerational dialogue as a naive waste of effort.

IV. REPRESENTATIVE DEMOCRACY: A MEANS/ENDS DILEMMA

The purpose of our military forces ought to be protecting the American system of representative democracy against overthrow by a foreign dictatorship. The bitter irony is that the real danger of overthrow may be from within, due to the steady expansion of military hegemony over the governmental decision-making process. I am not

³³"Those of us who are teachers and close to young people know the degree to which they have been alienated by all this expenditure on military things . . . They see a re-orientation of our national policy which they believe is turning us into a garrison state." I. I. Rabi, "A Discussion," in *ABM: Yes or No?* p. 40.

contending that America is ruled by a unified, malevolent, conspiratorial elite, but rather that the military-industrial complex has decisive influence over a vast number of important decisions, and that it often uses this power in an irresponsible manner.

The sources of power. Military influence has at least five components: money, voting power, personal contacts, internal organization, and a potent ideology.

The financial power of the complex is not measured in statistics alone, although the sheer size of the military budget is difficult to comprehend even remotely. But a good deal of this money is translated into power over decision-making. I am not saying that politicians are bribed, although campaign contributions inevitably have their effect. Perhaps more importantly, Department of Defense public relations expenditures (27.7 million dollars) are up more than one thousand per cent in the last decade.³⁴ In addition, since the more affluent segments of society tend to buy out the rest of us, it is not surprising that the military is extending its influence into "civilian" territory.

William D. Phelan, Jr. has pointed to some of the ways in which Pentagon buying power is penetrating the peacetime sector. There is a trend toward "the integration of interdepartmental operations in a(n)

³⁴I. F. Stone, "Fulbright Exposes the Pentagon's Multi-Million Dollar Operation Brainwash," *I. F. Stone's Weekly*, XVII (December 15, 1969), 3.

organizational structure that accords hegemonic power to the Pentagon."³⁵ The Department of Defense is beginning to undertake domestic social planning, and the entire emerging field of ultra-long-range planning is heavily influenced by the military and quasi-military "think tanks."³⁶ The trend is to turn problems over to the Department of Defense, because of its superior financial resources. For example:

The Department of Defense . . . spends 7.3 million dollars a year for foreign-area social and behavioral science research, and another six million dollars a year for policy-planning studies in foreign politico-military problems. This compares with the one hundred and twenty-five thousand dollars a year set aside for the State Department's research budget.³⁷

During the 1968 Senate Foreign Relations Committee Hearings, Senator Fulbright asked John Foster of Defense Research and Engineering why he was so heavily involved in non-defense research. Foster replied that it would be all right with him if another department took on some of this responsibility:

"It comes back again, I suppose, to this matter of money," Fulbright answered; "Nobody has as much money as you have to spend in this and other areas." Foster replied that he thought the money shortage in other federal agencies was "part of the problem."³⁸

³⁵Phelan, "The 'Complex' Society Marches On," *Ripon Forum*, V (January, 1969), 12.

³⁶"For the very powerful, prediction can be self-fulfilling." *Ibid.*, p. 13.

³⁷Donald McDonald, "Militarism in America," *The Center Magazine*, III (January, 1970), 15

³⁸"Military Funds: Senate Whets the Ax for ABM, Research, 'Think Tanks,'" *Science*, CLX (May 14, 1968), 861.

In addition to its financial power, the voting strength represented by the eight and one-half million Americans employed in defense industries and the armed forces is also highly significant. *This amounts to one job out of nine.*³⁹ To the average worker, the problems of an action-reaction arms race seem remote. What he is most aware of is "the economic manna descending from the defense-industry heaven."⁴⁰

Phelan's article also discusses the influence of a third factor, personal contacts.⁴¹ Perhaps the most important thing to be noted is that the number of high-ranking retired military officers in defense industries has tripled in the past decade.

How hard a bargain will officers . . . drive with contractors when they are one or two years from retirement and have the example to look at of over two thousand fellow officers doing well on the outside after retirement?⁴²

Another source of heightened influence is the increasingly effective internal organization of the military-industrial complex. A variety of institutions contribute to the intra-complex cooperation and communication. One example is the Defense Industrial Advisory Council. Since 1962, this council has helped to integrate defense contractors

³⁹ McDonald, *op. cit.*, p. 14.

⁴⁰ David Inglis, quoted by Hubert Humphrey, "The State of the Question: An Introduction," in *ABM: Yes or No?* p. 8.

⁴¹ For specifics, refer to Phelan, *op. cit.*, p. 15.

⁴² McDonald, *op. cit.*, pp. 11-12.

"into a unified group in matters of common interest."⁴³ There are twenty-five on the council.

Of the twenty-two members from outside the Defense Department approximately two-thirds are top executives from the fifty leading military contractors.

DIAC contributes to the strengthening of the defense sector relative to the other elements of the economy and to the power of the most politically influential corporations relative to the rest.⁴⁴

The communications role of the trade journal is also interesting. A classic example is *Ordnance*, a glossy, eye-appealing bimonthly published by the American Ordnance Association. AOA is "a patriotic, educational, scientific, non-political, and non-profit-making organization of American citizens dedicated to scientific and industrial preparedness for the common defense."⁴⁵ Each copy is about a hundred pages long, and filled with weaponry advertisements. The March-April, 1969 issue contained seventeen ads of full-page or double-page size. (This is typical.) One of these was directed toward *Ordnance* advertisers: "Your Company Message HERE . . . WOULD be read by the most important men on the Industrial-Military Procurement Team."⁴⁶ *Ordnance* carries extensive articles on weapons systems developments, with frequent references to which company is getting what contract. At the end

⁴⁴*Ibid.*, pp. 11-12.

⁴⁵Advertisement in *Ordnance*, LIII (March-April, 1969), p. 473.

⁴⁶*Ibid.*, p. 455.

of each issue is an advertiser's index and a convenient inquiry card (no postage stamp necessary if mailed in the United States).

One final weapon in the complex's arsenal of power is the ideology of anti-Communism. Rightly or wrongly, a great many Americans believe that the Communists are out to "bury us" in a fairly literal sense. This deep conviction leads to powerful resistance when attempts are made to reduce the military budget. Here lies the root cause of worst-case reasoning. Since the Soviets are infinitely malevolent, they will do us in if they possibly can. How odd that they have often exercised great restraint in constructing strategic nuclear weapons. But an almost religious commitment to anti-Communism can make otherwise intelligent people believe in "the Soviet Union's restless 20-year pursuit of military strategic superiority."⁴⁷ The pervasiveness of this contra-factual ideology has led Congress to serve as little more than a rubber stamp for the military budget. According to one representative, Don Edwards of California:

The examination that is given a military budget in the military committees is almost entirely one-sided. There is not even an effort to have a devil's advocate on the other side. I examined one series of hearings which ran to 3,000 pages of testimony from 300 witnesses, 298 of whom worked for the Pentagon or within the military services. The other two represented the National Rifle Association.⁴⁸

⁴⁷James McBride, "The Coming Missile Gap," *U. S. News and World Report*, XLV (February 26, 1968), 84.

⁴⁸"The Power of the Pentagon," *Progressive*, XXXIII (June, 1969), 48.

The power of the weapons complex, then, is due not only to its money, voting power, personal contacts, internal organization, and anti-Communist organization. Its power is also due to the fact that there is *no effective check* to restrain its influence. Such a situation is hardly conducive to democratic values.

The abuse of influence. Power there is and plenty of it, but is the power used irresponsibly? It seems reasonable to answer in the affirmative. One need not believe that "munitions makers" are less moral than the rest of the population. *One need only believe that they are typical.* Most Americans place tremendous emphasis on financial success. The result is that innumerable moral conflicts have been created by the clash between acquisitiveness and larger social values. This has led to all the problems associated with unsafe automobiles, industrial pollution, planned obsolescence, subliminal motivation, deceptive packaging, shoddy workmanship, and misleading guarantees. The list could be extended, but the point is easily made.

These conflicts have usually been rationalized by means of the prevailing pro-business ideology. Few have been so blatant as former General Motors president (and former Secretary of Defense) Charles Wilson, who told us that "What's good for General Motors is good for the country."⁴⁹ But there has certainly been an amazing degree of

⁴⁹ *Hearings on Military Procurement* (H. G. Rickover testifying), 90th Congress, 2nd Session, Joint Economic Committee (Washington: Government Printing Office, 1968), p. 52.

optimism about the compatibility of private gain and public good. The same moral problem arises in relation to the arms industry, and the commitment to anti-Communism makes rationalization even less difficult than in other businesses. "It must be quite easy for those in the defense industry to believe that the United States should not disarm because it cannot trust the Russians."⁵⁰ Ergo, what's good for General *Dynamics* is also good for the country.

A telling example of this sort of rationalization is the acceptance and even justification of "low-balling."⁵¹ It may have seemed curious that the cost of weapons systems is grossly and consistently underestimated. Many of the underestimates are quite deliberate. Since a company is afraid a weapon may not be built if it bids realistically, and since this would mean a great loss not only to profit but also to the struggle against Communism, a "low ball" bid is presented. The practice is openly admitted in military trade journals:

The problem is that too often the only way in which a program can be gotten started is wilfully and with premeditation, sharply to underestimate the program cost--indeed, to gear the estimate to a known availability of funds rather than to a valid estimate of project costs.⁵²

⁵⁰ Arnold M. Rose, *The Power Structure* (New York: Oxford University Press, 1967), p. 95.

⁵¹ "The Military-Industrial Complex," *Newsweek*, LXXIV (June 9, 1969), 79.

⁵² P. Eleson, "Defense Budget Cuts," *Ordnance*, LIII (May-June, 1969), 548.

(Note that these practices are perceived as being "forced" upon defense industries. A person may avoid a good deal of moral agonizing if he convinces himself that he has no choice.)

Compare another quotation, this from a biweekly armament industry newsletter:

It seems most unfair to insinuate that the fault lies mostly with industry. Arbitrary cuts by the Budget Bureau and Congress . . . tend to force DOD management into overly optimistic estimates.⁵³

Congressional cuts are characterized as being "arbitrary." This hardly reflects commitment to and support of the democratic process.

Some, though not all of the concerns outlined in this section have begun to come into public awareness. The result is an emerging social consensus that the arms establishment has too much unchecked authority. Such unlikely periodicals as *Business Week*,⁵⁴ *Space/Aeronautics*,⁵⁵ and the *Wall Street Journal*⁵⁶ have recently joined this

⁵³"Bulletin #344," *The Common Defense* (June, 1969), 4.

⁵⁴"The Pentagon's Costly Mistakes," *Business Week*, 2066 (April 5, 1969), 100.

⁵⁵Englebert Kirchner, Executive Editor of *Space/Aeronautics*, quoted by I. F. Stone, "Even Aerospace Organs Skeptical of the ABM," *I. F. Stone's Weekly*, XVII (May 5, 1969), 2.

⁵⁶"Reviewing the Military," *Wall Street Journal*, CLXIII (March 19, 1969), 20.

consensus. An editorial in *Business Week* is especially worth quoting:

There is little doubt that at the root of the inability of government to check the development of many unsound weapons systems is what the late President Dwight D. Eisenhower called "the unwarranted influence, whether sought or unsought, of the military-industrial complex . . ."

There is no more important problem for President Nixon and the Congress than to establish adequate supervision and control of Defense Dept. programs, without hampering operations of the agency. The Pentagon as well as powerful companies will fight any attempt to curb their activities. But a method to check the proliferation of unnecessary and unsound military programs must be found. The alternative is sure disaster.⁵⁷

When *Business Week* refers to the armed services in language that would befit *The Progressive*, one can assume that a consensus has been established. The task ahead is to bring more facts to light about the influence of the military in specific cases. The ABM is an excellent illustration, and two important questions must be posed at this point. First, how much have the pressures from vested interests distorted the government's judgment in making the ABM decision? And second, what effect will missile defense have on the future power of the military-industrial complex?

The more significant a weapon becomes to business and to the military, the greater will be the tendency to exaggerate its value. By this criterion the interest in BMD is easy to understand. To the Army, Safeguard represents the only significant strategic missile capability.

⁵⁷"The Pentagon's Costly Mistakes," p. 100.

"The Army naturally wants to preserve this mission."⁵⁸ For industry, it represents at least twenty billion dollars in sales, and much more if the system is expanded or is several times more costly than anticipated. According to Frederick Collins, the prime contractors and subcontractors for the ABM have at least a million employees in 42 states.⁵⁹

The weapons complex has been as concerned about ABM as one would expect. As early as 1961, President Kennedy

began to see full-pages for it in popular magazines like *Life* and *Saturday Evening Post*, proclaiming how Nike-Zeus would defend America, and listing the industrial towns which would profit from the contracts for it--advertisements, by the way, that were generally paid for with government money as contract expenses.⁶⁰

It is now illegal to advertise with government funds, but General Starbird (director of the Safeguard program) has recently directed his staff to "cooperate and coordinate with industry on public relations efforts by industries involved in the Sentinel program."⁶¹ Senator Fulbright commented a few months after this directive that Starbird "certainly knows how to organize the public relations talents in the

⁵⁸Betty Goetz Lall, "Gaps in the ABM Debate," *Bulletin of the Atomic Scientists*, XXIII (April, 1967), 46.

⁵⁹Collins, "\$30 Billion for Whom?" *New Republic*, CLVIII (March 11, 1967), 13.

⁶⁰Jerome Wiesner, "Against: Jerome B. Wiesner," in *ABM: Yes or No?* p. 15.

⁶¹"A+B+M=Lunacy," *New Republic*, CLX (March 8, 1969), 8.

Pentagon and a lot of other people."⁶² One recent ploy consisted of full-page advertisements in leading newspapers on June 30, 1969. The ad contended that eighty-four per cent of all Americans supported an ABM system, although the Gallup Poll showed only twenty-five per cent, with most people undecided. Eleven of those who signed the ad were directors or top executives of eight companies that hold over one hundred fifty million dollars in ABM contracts between them. (The ad didn't mention this fact, nor was there a later advertisement saying that Opinion Research had disavowed the eighty-four per cent figure, saying its poll had been misrepresented.)⁶³ Whether or not the administration was behind this propaganda, Nixon later gave his blessing to the ad's prime backer, William Casey, by appointing him to--of all places--the Arms Control and Disarmament Agency.⁶⁴

Misleading public relations reports are only one of the highly undemocratic practices that Safeguard supporters have employed. Here are some additional illustrations.

When asked if independent scientists had been consulted in the March, 1969 review of ABM policy, Deputy Secretary Packard mentioned the name of Wolfgang Panofsky. The implication was that Panofsky had

⁶²*Strategic and Foreign Policy Implications . . .*, I, p. 313.

⁶³McDonald, *op. cit.*, p. 28.

⁶⁴I. F. Stone, "Five of the Largest ABM Contractors Signed and Bankrolled That 84% Pro-ABM Ad," *I. F. Stone's Weekly*, XVII (July 28, 1969), 3.

been formally consulted and had supported Safeguard. Panofsky happened to be in the Committee room at the time, and asked to testify.⁶⁵ It was disclosed that he opposed the ABM, and had only spoken with Packard for half an hour:

Senator Gore. About half an hour?

Dr. Panofsky. That is correct.

Senator Gore. Did you call upon him or did he call upon you?

Dr. Panofsky. We happened to accidentally meet at the airport.⁶⁶

Fulbright later pointed up the issue that was involved:

This . . . raises very serious questions of relations between this committee, the Congress and the executive. Are we to be trifled with and told there has been a review if there has not? My impression is that there has been no review at all, outside of the people within the Pentagon who are completely in agreement about the program.⁶⁷

In other words, what happened to the democratic system of checks and balances?

Packard also told a Senate subcommittee that no Safeguard components would be purchased until the Senate approved the system. Later it was discovered that his pledge had been flagrantly disregarded.⁶⁸

A final example: Although the General Accounting Office has

⁶⁵I. F. Stone, "Well, If It Ain't Little Old Lyndon B. Nixon," *I. F. Stone's Weekly*, XVII (April 7, 1969), 1-2.

⁶⁶*Strategic and Foreign Policy Implications . . .*, I, p. 328.

⁶⁷*Ibid.*, p. 336.

⁶⁸*Ibid.*, II, pp. 617-8.

been authorized to report continuously on Phase I of Safeguard, the Pentagon has refused to provide access to crucial information. Instead, GAO is only permitted to read documents approved by General Starbird. According to Comptroller General Elmer B. Staats, "We are precluded from seeing . . . any documents at variance with a final decision."⁶⁹

Is this the way to preserve the democratic process?

It is difficult to determine how much influence the Pentagon and its allies have had on ABM policy. Some would argue with considerable persuasiveness that these pressures constitute almost all of the reason for deployment.⁷⁰ In any case, such pressures have certainly been decisive. Secretary McNamara admitted that the decision to build Sentinel was a close one, made on "marginal grounds."⁷¹ If military-

⁶⁹I. F. Stone, "How the Pentagon Shuts Out The Watchdog," *I. F. Stone's Weekly*, XVII (October 6, 1969), 3.

⁷⁰Senator George McGovern put it this way: "It is my considered judgment that last year the Johnson Administration yielded to the pressure of the military-industrial complex in agreeing to deploy a 'thin' ABM system supposedly against the Chinese. This was not a security decision based on a broad view of national and international priorities; it was rather a surrender to mounting political pressure from military-minded Senators, Congressmen, generals, and arms manufacturers. . . ."

 I do not mean to imply that supporters of the ABM have sold their souls to the armament lobby. These men are acting in what they believe is the interest of their constituents. The creation, continuance, or abolition of a defense plant . . . may affect thousands of jobs and millions of dollars in purchasing power. Such considerations weigh heavily in the minds of Congressmen eager to . . . win re-election."

"But let us face it: The Anti-Ballistic Missile is little more than a gigantic make-work military project." McGovern, "The ABM: Unsafe at Any Price," *Progressive*, XXXIII (February, 1969), 22-24.

⁷¹*Scope, Magnitude, and Implications* . . . , p. 111.

industrial pressure had been even slightly reduced, the outcome would almost certainly have been quite different. The same is true of Safeguard, which cleared the Senate by a single vote.

The main concern of this study, however, is not the causes but rather the consequences of ABM policy. What would these consequences be, in relation to the power of the weapons establishment? Clearly, a twenty-billion-dollar-plus Safeguard network is a choice plum, not only financially but also in terms of morale. Each side of the controversy over military influence has come to see Safeguard as a symbolic test case. If the Pentagon is defeated, one doubts that its morale would collapse. This would be one of the few times it has lost a major issue since World War II. Its critics cannot fall back on such a long string of victories. With few exceptions, the history of the peace movement has been a history of frustration, particularly in relation to Vietnam. After years of defeat, more and more are dropping out or becoming advocates of violence. These include some of the most capable young people of this college generation. A great many of those who keep on fighting have really lost faith in the democratic process, and aren't sure why they still continue to work within the established framework. Short of withdrawal from Vietnam by the end of 1970, there is nothing that would mean more to the peace movement than the cancellation of Safeguard.

A word about self-righteousness. To an alarming degree, America has become a weapons culture, with distorted foreign policies, distorted priorities, distorted attitudes, and excessive military control

over the decision-making process. It is worth re-emphasizing, however, that those who work in the weapons complex are not unusually malevolent men. Their emphasis upon arms is partly a result of overspecialization. As Senator Fulbright put it:

I certainly do not in any way wish to raise any question about the integrity of these scientists. It is a matter of human nature. If one . . . is working for . . . Western Electric . . . it would be rather foolish if he did not have a bias in favor of ABM just as I have a bias in favor of cotton and poultry. This is a fact of life-- [laughter]and I do not get offended if you think I am not objective about poultry. Of course I am not, and the same thing holds for the ABM.⁷²

The problem is that the American voting public has allowed a huge proportion of our citizens to spend their lives developing our capacity to kill people, and furthermore has failed to create an effective counterweight to the influence of the arms establishment. To indict the military is to indict every one of us. In order to preserve representative government, an institution has been created that makes the decision-making process less and less representative as its power expands. We have placed ourselves in a dilemma between democracy as an end and democracy as a means, and are in danger of losing both.

⁷²*Strategic and Foreign Policy Implications . . . , I*, pp. 206-7. Contrast this realistic position with Donald Brennan's comments in Chapter V.

CHAPTER VII

A QUESTION OF VALUES

Because the indictment against ABM is so overwhelming, I seem to have twice contradicted myself. First, I claimed in Chapter I that value-judgments were crucial in the formulation of military policy. I then refuted the case for ABM on almost purely *technical* grounds in Chapters III and IV. Second, I talked continually in Chapter II about how difficult it was to make value-judgments, and how unreliable were our conclusions. I then spoke quite confidently in subsequent sections. Whatever became of all that tentativeness?

These may seem to be contradictions, but they are not. Resolving the apparent dilemmas will help to clarify the role of the ethicist in the making of military policy.

The first step toward resolution is to develop the two contradictions as sharply as possible. To do so, I will show how the arguments for Safeguard can be defeated *with confidence, on technical grounds*. I will then show how some *less reliable, value-oriented* arguments are absolutely essential to an appraisal of missile defense.

I. ABM: A DOMINATED STRATEGY

The simplest way to indict the administration's proposal is to utilize the concept of logical dominance.

Dominance is achieved in logic when a particular policy provides higher values than any alternative for some of the possible futures, and provides no lower values for any of them.

In practice, of course, dominant policies guaranteed to be no worse than any alternative under any condition, are rather hard to come by if there are more than a very few policies to choose among. It is, however, frequently possible to *eliminate* a policy by the use of dominance.¹

The ABM is a fine example. When compared with the strategy of airborne alert, it is rather neatly dominated in all but one area.

Before comparing the two approaches, one needs some standards for comparison. As the previous chapters indicate, a good strategic weapon should reduce the danger of strategic war, limit damage in case of attack, encourage arms control and disarmament, cost as little as possible, not build up the arms establishment, decrease American belligerence, minimize the risk of accidental detonations, and mitigate against militaristic attitudes.

There would seem to be no predictable difference in the degree to which building an ABM or keeping a part of our bomber force in the air would encourage militaristic attitudes or add to the danger of an accidental detonation. If bombers on alert spent a significant amount of their time flying over populated areas there would probably be cause for concern in this area, but this would not be necessary. This leaves six criteria that must be considered.

¹Robert A. Levine, *The Arms Debate* (Cambridge: Harvard University Press, 1963), p. 42.

Reduction of the danger of strategic warfare with weapons of mass destruction. The alleged advantage of Phase I is that it would maintain our deterrent and therefore reduce the likelihood of an attack. In Chapter III the basic fallacy of the argument was pinpointed. Safeguard can be destroyed with ICBM's such as the SS-11 and SS-13. These missiles are not effective against hardened Titan and Minuteman silos. They are only useful against "soft" targets, such as cities and Safeguard's radar. The Soviets have several hundred of them, enough to suffer a first strike and reply with unacceptable damage. If they struck first, however, a great many of these rockets would be "extra," and the ABM radar would be a perfect target. After exhausting or penetrating our missile defenses with SS-11's and SS-13's, they could strike at our Minutemen with the SS-9. Safeguard would not defend the deterrent. (It has been demonstrated that the chances of such an attack are incredibly slim, but this is not the point when discussing logical dominance.) The bomber alert is superior, since it would keep a powerful retaliatory force safe from surprise attack. In this sense it could make an attack less likely, and it is not apt to increase the danger of war in any important respect.

Limitation of damage in case of attack. The bomber is not a damage-limiting device, as Phase II of Safeguard is purported to be. The ABM would be ineffective against a Soviet attack, however, and Chapter IV revealed some of its weaknesses vis-a-vis the Chinese. It could have an advantage in case of unauthorized attack on a small scale,

assuming that the system will work effectively at all.

Promotion of arms control and disarmament. The role of missile defense in complicating negotiations, reducing the meaningfulness of agreements, increasing tension, and accelerating the arms race by worsening the "worst cases" which the Soviets are preparing against have been discussed in Chapter V, along with comments about the test ban and nonproliferation. Here the alternative to ABM is clearly superior. One would not have to order an air alert until SALT had proven a failure, until our ICBM's were really in danger, until our tactical weapons and bombers were similarly neutralized, until technological breakthroughs had made Polaris and Poseidon vulnerable, and until the Soviets had discovered a way to blank out American radar. Such a state of affairs would not even be theoretically possible until mid-decade; SALT could proceed without falling under the shadow of an expanding American ABM.

Minimization of probable expenditure. The word to be emphasized is "probable." No one can predict these costs with precision. An ABM will involve an outlay of at least nineteen billion dollars, about one-third of which would help to defend the deterrent (Phase I). Five years of an airborne alert would cost ten billion dollars,² if it ever proves necessary. My own subjective estimate is that the odds against

²*Strategic and Foreign Policy Implications of ABM Systems* (Edward Teller testifying), 91st Cong., 1st Sess., Subcommittee of Senate Committee on Foreign Relations (Washington: GPO, 1969), II, p. 521.

all the conditions in the preceeding paragraph being fulfilled are considerably greater than one hundred to one. Even at ten to one, the probable expenditure would be one billion dollars, far less than Phase I.

Limitation of influence of the military-industrial complex.

Since the bomber strategy would cost less and since a defeat for ABM would set a precedent for further cutbacks, Safeguard loses out on this criterion as well.³

Minimization of American belligerence. On this final factor there seems to be no reason to believe the ABM would be superior. Furthermore, missile defense has the disadvantage of making it easier to believe we are invulnerable to Chinese attack, which we most certainly would not be. It might tempt us toward brinkmanship, and lull the public into disregarding the serious risks involved.

With the exception of limiting damage in case of unauthorized attack, the bomber approach is never inferior to Safeguard, and it is markedly superior in terms of several criteria. The ABM is eliminated as an option by the logically dominant airborne alert.

II. THE ROLE OF VALUES

The two contradictions mentioned above should now be seen in sharp relief. Emphasis has been placed on value-judgment, when techni-

³Furthermore, a defeat for the arms establishment would reduce the alienation and desperation of young liberals and radicals.

cal arguments are really quite sufficient, and I have stated these technical arguments with considerable confidence after stressing the tentative nature of our conclusions.

To resolve these dilemmas, one must remember that defense policy should be evaluated with an eye to action. It may be argued that simply thinking critically about the ABM is good in itself, but it would be better if such thought eventuated in meaningful efforts to improve the human condition. Very little activity will result if the ABM is seen as an error of moderate proportions. If it is considered a threat to the future of mankind, the likelihood of action is greatly enhanced. Some will choose to act in terms of organized political pressure. A related outcome might be a reevaluation of one's overall understanding of American society. If Safeguard is an egregious blunder, one may be led to ponder the intellectual presuppositions and political institutions which generated this monstrosity. In short, even though ABM can be solidly attacked with technical argumentation, ethical analysis is involved in the crucial question of whether thought will lead to action. The first contradiction has therefore been resolved. The second contradiction is closely related. These ethical considerations are highly tentative, being based on an unverifiable pattern of impressions about the nature of man and society. Therefore when I have sounded confident, this confidence is appropriate only within the context of a certain set of values.

To illustrate more concretely the importance of these unprovable

value-assumptions, I have attempted to imagine how those whose priorities are different than my own would feel about ABM.

III. A SIMPLIFIED ANALYSIS OF THE IMPORTANCE OF VALUES

Suppose a person with different presuppositions were to reflect on the material I have listed in the bibliography. How would his conclusions be different? Figures 3, 4, and 5 attempt to illustrate in simplified fashion some possible patterns of value-related disagreement. Figure 3 provides some idea of what I consider to be the most important positive and negative consequences of various ABM policies. Figure 4 examines the same consequences from the viewpoint of what Levine calls the "middle marginalist" position, Figure 5 that of the "anti-Communist marginalist." (Both terms will be defined below.)

What the charts involve. On each figure, I have divided up the human consequences of missile defense into various orders of magnitude. In the center of the page is a large section marked "little change." The items listed in this area are those in which the probable result of the ABM is expected to be relatively neutral. Above this section are the ABM's assets, each level representing a different order of magnitude. The most important assets are at the top. Below, the "minus" sections represent the liabilities; the worst of these are in the bottom section. Thus, Figure 3 shows that for Phase II the advantage of saving lives and property in event of unauthorized attack is considered approximately equal to the disadvantages resulting from an increase in the power of

Complete Phase I----Expand to Phase II--Abolish Safeguard

+++			
++			
		Damage limitation (unauthorized)	Arms control and disarmament
+			
			Power of MIC, Civilian priorities
Little Change	Damage limitation (S. U., China, or unauthorized),	Damage limitation (S. U. or China),	Damage limitation (S. U., China, or unauthorized),
	War danger (S. U. or China),	Same,	Same,
	Militaristic attitudes,	Same,	Same,
	Accidental detonation, American belligerence	Same	Same, American belligerence
-			
	Power of MIC (military- industrial complex)	American belligerence	
--			
	Civilian priorities, Arms control and disarmament	Power of MIC	

		Civilian priorities, Arms control and disarmament	

Figure 3. My own evaluation of Safeguard (an anti-war marginalist position).

the military-industrial complex. It is also comparable to the benefit gained for arms control and disarmament which would result if the ABM were abandoned.

Vertically, these charts utilize an order of magnitude approach. Horizontally, they use what might be termed a case-comparison method. Three different ABM policies are compared in regard to eleven variables.⁴

Notice that normative thinking heavily influences the choice as to which consequences of ABM deployment are listed as best and which are listed as worst. The best consequence of Phase II, from my own perspective, is damage limitation in case of unauthorized attack. Such an attack is most unlikely, but since we know so little about the probabilities involved this factor is weighted rather heavily. (Remember that the norms of action tell us what to do when we are in doubt; the more the doubt, the more we should rely on the norm.) The most disastrous of Safeguard's consequences is its impact upon long-range hopes for disarmament. Certainly it will not make disarmament impossible, but any significant delay becomes crucial when time is running out.

Figures 4 and 5 involve an attempt to see the same facts which I have encountered in my study of BMD from the perspective of two different schools of thought. It must be remembered that this involves my

⁴Only eight criteria were listed at the beginning of this chapter, but some have been subdivided. "Damage limitation" is broken down in terms of a Soviet attack, a Chinese attack, and an unauthorized attack. "War danger" is broken down in terms of China and the U.S.S.R.

understanding of viewpoints which are not my own. I have tried to be fair, but distortions are inevitable in such an undertaking.

The two different world views to be considered are derived from Robert A. Levine's classic typology in *The Arms Debate*.⁵ The types he discusses are quite general, of course; it is impossible to neatly divide up the infinite variety of positions that exists in the real world. His categories are also breaking down with the passage of time, but they remain reasonably useful.

Levine separates writers on military policy into marginalists and systematists; we will consider only the former. The systematists, omitted for the sake of brevity, take positions which involve very radical changes. (The anti-war systematists generally favor pacifism; the anti-Communist systematists support a very hard-line "forward strategy.") Marginalists want to change policy by relatively small increments. I would fit rather firmly into the group Levine characterizes as anti-war marginalists, and my attitudes on the ABM are fairly typical of that group. (When I began this study I was much closer to the middle marginalists, who are described below.) Anti-war marginalists feel that Communism is a threat, but certainly not the major threat we are facing. The main problems today are war, poverty, and the failure of human institutions to respond to human needs. Humanitarian concerns are emphasized; imperialism and militarism are opposed;

⁵Robert A. Levine, *The Arms Debate* (Cambridge: Harvard University Press, 1963), *passim*.

and it is considered more desirable to influence other nations by rewards than by punishments. Constructive planning for the distant future is extremely important, particularly in terms of disarmament.

Opposed to the anti-war marginalists are the middle marginalists and the anti-Communist marginalists. The next few pages represent an attempt to empathize with these two schools of thought.

The middle marginalists. Middle marginalists are fairly content with our present military policy. Many of these individuals are technical advisers or political decision-makers. Levine refers to some of them as the balanced value middle, and says they emphasize the threat of Communism a good deal more than the anti-war school. Their values are therefore balanced between fear of war and fear of the left. Others are called analytical middle marginalists. These people have a value-orientation similar to the anti-war school, with some important exceptions. They are far less concerned with the long-run, and incline more to short-term adjustments than to grand designs. They believe that the ad hoc approach can prevent major war, since they feel more secure about deterrence and about man's ability to be rational instead of perverse. Threats from the right, including the weapons complex, are of minimal concern. (This is probably changing, but I do not assume any change in Figure 4.) Middle marginalists are not afraid that our power will corrupt us; in the world as it is a policy of firmness will best preserve the peace. I would add from my own observations that there is less emphasis on humanitarian concerns than is typical of the

anti-war marginalist.

Figure 4 indicates that the middle orientation would be inclined against Safeguard, but not strongly enough to be committed to its abolition. This is an important shift from my own position, and there are three main reasons for the disagreements between Figures 3 and 4. First, because of the focus on short-run adjustments, the long-range prospects for disarmament are seen as far less crucial than I have contended they are. Second, there is less concern about pressing civilian priorities. More precisely, there is less concern *in proportion to other values*, particularly in terms of the increased emphasis which the "balanced value middle" places upon stopping Communism. Finally, the threat from the armament complex is, to my mind, seriously underestimated. This may be due to a different evaluation of human rationality, as well as a host of interconnected value-judgments about the legitimacy of force in world affairs, the human consequences of training young men as killers, the desirability of modeling the world in our own image, the danger of deepening our historic fascination with weaponry, and all of the other issues that arise when a nation concentrates its energies on stockpiling and refining the means of destroying life.

The anti-Communist marginalists. The final chart represents a school of thought which places much more emphasis on defending freedom than do the other marginalists, at least when the threat to freedom comes from the left. Such a viewpoint stresses the need to avoid Communist aggression, halt the peaceful spread of Marxism, and even to roll

Complete Phase I----Expand to Phase II----Abolish Safeguard

+++	Firmness, Prestige		
++	Firmness, Prestige	Damage limitation (unauthorized), War danger (S. U. or China)	
+	War danger (S. U.)	Damage limitation (S. U. or China)	
Little Change	Damage limitation, War danger (China), Militaristic attitudes, Accidental detonation, Power of MIC, Arms control and disarmament	Same, Same, Same, Same	Every factor but three
-	Civilian priorities		Power of MIC
--		Civilian priorities	Prestige, Firmness

Figure 5. A possible anti-Communist marginalist evaluation of Safeguard.

back Communist governments. (The other two orientations place almost no emphasis at all on this last factor.) Threats from the left are to be countered by American toughness, particularly military toughness. There is little optimism about the chances for arms control. The solution is to prevail, not to negotiate. Disarmament is not a viable goal, and the arms race is a challenge and an opportunity.

Bearing in mind that all these characterizations are extremely general, note what has happened on Figure 5. First of all, *prestige* has been added as a value; I doubt that the other two positions would have taken it into account. Another interesting change is that United States belligerence now becomes *firmness*, and is now a very important advantage of ABM deployment. (Furthermore, because firmness and prestige are seen as effective deterrents, Safeguard is believed to reduce the danger of war.) The power of the military is also seen in a favorable light, and in general Figure 5 forms an approximate mirror image of my own position.

IV. CONCLUSION

These three illustrations probably understate the importance of value-judgments. I have assumed that the hypothetical middle marginalists and anti-Communist marginalists have reached the conclusions on the last two figures after reading the material in the bibliography to this paper. In practice, different values lead us to examine different versions of the facts; some read *Ramparts* and some read *National Review*.

Nevertheless, the differences between the three positions are quite impressive. Even though technical argumentation seems to show that ABM is a dominated strategy, one must make a value-judgment in order to decide whether Safeguard is a serious enough mistake to justify organized opposition and whether it should lead to a reevaluation of the role of the military in American domestic and foreign policy. My own values lead me to favor such opposition and such a reevaluation. Those of the middle marginalist do not. Turning to the anti-Communist marginalist, one discovers that even to say that ABM is dominated by the manned bomber involves some covert value-judgments. One recalls that in determining whether the bomber strategy was superior, several criteria were established. One of these was the minimization of American belligerence. For the anti-Communist, the vice of belligerence becomes the virtue of firmness, and Safeguard comes out ahead. Furthermore, the criterion of prestige has been added. Certainly a sleek and intricate Safeguard network has more status appeal than the commonplace B-52.

Ethical analysis is decisive, even in the case of the ABM. It must be even more important when the technical objections against a weapon are considerably less compelling.

The importance of dialogue. The conclusion to be drawn is *not* that all things are relative, that policy judgments are largely a matter of taste, and that moderate men will agree to disagree. It is rather that because basic orientations are so decisive in military policy-making, a more extensive dialogue about arms philosophy is absolutely

essential. Such a dialogue is more difficult than a discussion about "the facts," but it is certainly not impossible. All of us have experienced meaningful conversations about these matters. Largely because of such conversations (with people and with books), I myself have moved from an anti-Communist marginalist orientation to an anti-war marginalist orientation. A climate which discourages this sort of dialogue is extremely dangerous, and this is the sort of climate that has dominated strategic thinking in the past. Men have imagined that we could objectively analyze the facts of the matter, as was indicated by the quotation by Glenn H. Snyder with which this thesis began. In his article, Snyder goes on to draw the usual conclusion: military policy should be made through "centralized high-level decisions based, not on compromise, but on a 'rational' [sic] determination of the ensemble of means which best supports the agreed national interest in security."⁶ The appeal to amoral expertise has drawn us close to destruction. Men have accepted weapons like Safeguard because "presumably the Pentagon has plugged figures into the equations, run the calculations, and reached an affirmative conclusion."⁷ If this paper has demonstrated anything at all, it has shown that the ABM controversy is in very large measure

⁶ Glenn H. Snyder, "The Politics of National Defense," *Journal of Conflict Resolution*, VI (December, 1962), 371.

⁷ Neil H. Jacoby, quoted by Hubert Humphrey, "The State of the Question: An Introduction," in *ABM: Yes or No?* (Santa Barbara: Center for the Study of Democratic Institutions, 1969), p. 9. Mr. Jacoby was apparently serious.

a question of values. Furthermore, the same sort of analysis that has been applied to Safeguard could be applied to most any other strategic weapon, although the conclusions would not be the same in every case. To exclude such ethical reflection is as hazardous as arbitrarily excluding factual analysis. In short, "rational" decision-making is the most irrational approach of all.

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APPENDIX
CONCENTRATION OF FIRE

It was stated on page sixty-four that if a Chinese force of seventy-five missiles were concentrated in the New York/New England area, at least five to fifteen H-bombs would explode over their targets. This conclusion was based on the following assumptions:

1. China may have seventy-five missiles by the late 1970's.¹
2. There will be approximately sixty ABM's in the New York/New England area. It has been estimated that Phase II of Safeguard involves 500 rockets, distributed among a dozen sites.² This averages out to forty-one or forty-two per site. Since it is possible that 500 is an underestimate, or that a disproportionately large number of Sprints and Spartans would be located in the New York/New England area, I have raised the figure from forty-two to sixty.
3. Each Chinese missile will have the relatively low reliability factor of .4. This means that out of seventy-five fired, thirty would be likely to explode over their targets.
4. Of the forty-five that would not, several would reach their targets, but fail to detonate properly. For the sake of simplicity,

¹Yuan-li Wu *et al.*, *Communist China and Arms Control* (Palo Alto: Hoover Institution, 1968), p. 50. Cf. *Scope, Magnitude, and Implications of the United States Antiballistic Missile Program* (John Foster testifying), 90th Cong., 1st Sess., Joint Committee on Atomic Energy (Washington: GPO, 1967), p. 17.

²Abram Chayes *et al.*, "An Overview," in Abram Chayes and Jerome Weisner (eds.) *ABM: An Evaluation of the Decision to Deploy an Anti-ballistic Missile System* (New York: Signet, 1969), p. 45; Steven Weinberg, "What Does Safeguard Safeguard?" in Chayes and Weisner, *op. cit.*, pp. 95-96.

this factor will be disregarded, and it will be assumed that by the time the ICBM's are within range of Safeguard, there are only thirty RV's left..

5. The Chinese will aim seven or eight missiles at each of ten urban areas. At forty per cent reliability, this means that three ICBM's per city will get within range of Safeguard.

6. Since there are thirty RV's and sixty ABM's two will be targeted on each RV.

7. Each ABM will have a rather high reliability factor--.7.

Abram Chayes, Jerome Weisner, George Rathjens, and Steven Weinberg have made a similar set of assumptions in exploring a possible attack scenario. They concluded that if three ICBM's were successfully launched against each city, and two ABM's with a reliability of .7 were directed against each of the incoming RV's, about twenty-five per cent of the attacking rockets would penetrate successfully.³ Even with a fairly reliable ABM, then, seven or eight out of the original thirty RV's would get through. Since there are many reasons why Safeguard is likely to be undependable, the conclusion seems justified that from five to fifteen Chinese rockets would explode over their targets. Furthermore, no account has been taken of the use of decoys, chaff, black-out, salvage fusing, or CBW bomblets. And finally, the ICBM's may have a higher reliability than has been hypothesized, since the Chinese can draw on over a decade of Soviet and American experience with missiles.

³Chayes *et al.*, *op. cit.*, p. 31.